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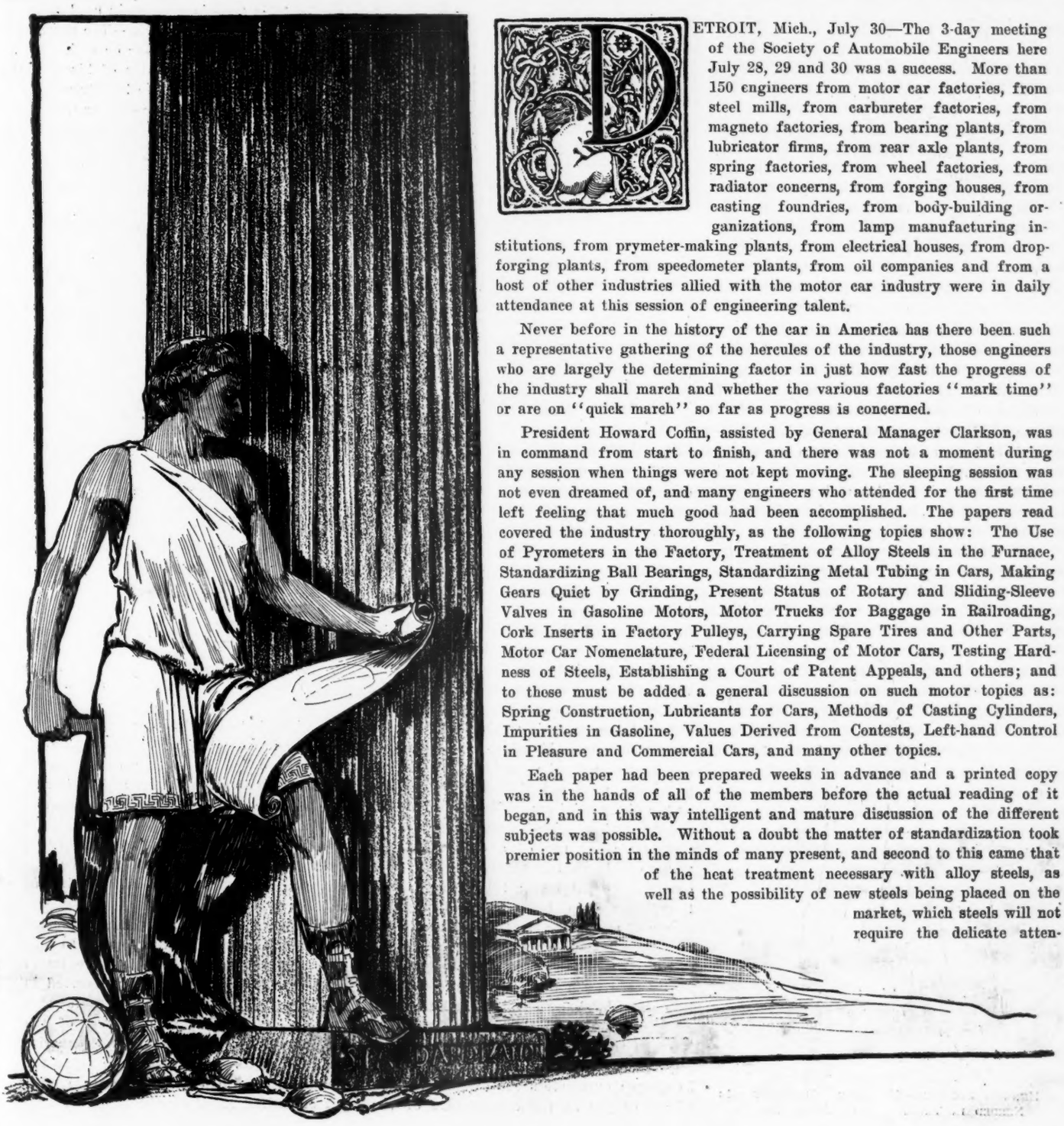
MOTOR AGE

STANDARDIZATION THE THEME OF ENGINEERS



DETROIT, Mich., July 30—The 3-day meeting of the Society of Automobile Engineers here July 28, 29 and 30 was a success. More than 150 engineers from motor car factories, from steel mills, from carbureter factories, from magneto factories, from bearing plants, from lubricator firms, from rear axle plants, from spring factories, from wheel factories, from radiator concerns, from forging houses, from casting foundries, from body-building organizations, from lamp manufacturing institutions, from prymeter-making plants, from electrical houses, from drop-forging plants, from speedometer plants, from oil companies and from a host of other industries allied with the motor car industry were in daily attendance at this session of engineering talent.

Never before in the history of the car in America has there been such a representative gathering of the hercules of the industry, those engineers who are largely the determining factor in just how fast the progress of the industry shall march and whether the various factories "mark time" or are on "quick march" so far as progress is concerned.

President Howard Coffin, assisted by General Manager Clarkson, was in command from start to finish, and there was not a moment during any session when things were not kept moving. The sleeping session was not even dreamed of, and many engineers who attended for the first time left feeling that much good had been accomplished. The papers read covered the industry thoroughly, as the following topics show: The Use of Pyrometers in the Factory, Treatment of Alloy Steels in the Furnace, Standardizing Ball Bearings, Standardizing Metal Tubing in Cars, Making Gears Quiet by Grinding, Present Status of Rotary and Sliding-Sleeve Valves in Gasoline Motors, Motor Trucks for Baggage in Railroading, Cork Inserts in Factory Pulleys, Carrying Spare Tires and Other Parts, Motor Car Nomenclature, Federal Licensing of Motor Cars, Testing Hardness of Steels, Establishing a Court of Patent Appeals, and others; and to these must be added a general discussion on such motor topics as: Spring Construction, Lubricants for Cars, Methods of Casting Cylinders, Impurities in Gasoline, Values Derived from Contests, Left-hand Control in Pleasure and Commercial Cars, and many other topics.

Each paper had been prepared weeks in advance and a printed copy was in the hands of all of the members before the actual reading of it began, and in this way intelligent and mature discussion of the different subjects was possible. Without a doubt the matter of standardization took premier position in the minds of many present, and second to this came that of the heat treatment necessary with alloy steels, as well as the possibility of new steels being placed on the market, which steels will not require the delicate atten-

tion and treatment necessary in the heat-treatment of chrome nickel steel.

The session opened at 9 o'clock Thursday morning in the roof garden of Hotel Tuller, where all but one of the sessions were held. In the forenoon executive matters were taken up by the council and the various committees, the chief topic of discussion being the enlargement of the membership of the society and whether arrangements should be made in the constitution whereby many people not recognized engineers or spending their time exclusively in the designing of cars or car parts could be admitted to membership. There is a strong feeling that many who are big factors in the industry but who are not engineers would be of great value to the membership roster, and there is also the feeling that to do the greatest good is the object of the society, and that this can only be done by basing the membership on broad lines, as has been done in many of the big European societies of engineers. With this object in view notices of changing the constitution was given, so that the matter will come up for consideration at the winter session in New York.

In addition to reading and discussing different papers there was half a day on Friday given over to visiting different plants, the attendant engineers being divided into three groups and furnished with motor cars, so that three excursion parties were flitting throughout different parts of the city, each party visiting upwards of three or four plants. Group No. 1 visited the McCord Co. radiator plant, the Packard factory and the Chalmers company; group No. 2 visited Cadillac, Burrows and Timken-Detroit plants, and group No. 3 went to E-M-F, Detroit Steel Products Co. and other places.

Friday afternoon was recreation time, thanks to the Timken-Detroit Axle Co., which chartered a river steamer and took

HENRY SOUTHER—EXTREME DELICACY IS NEEDED IN TREATMENT OF ALLOY STEELS

D. F. GRAHAM—ALL BALL BEARINGS SHOULD BE ONE SIZE

the entire party up the Detroit river and through Lake St. Claire to the flats, where a frog supper was served. On the return journey the dock was canvassed in and the sessions resumed, three important papers being read. The Saturday session was a busy one from early morning until 6 in the evening, when the last discussion was closed.

Pyrometers—By W. H. Bristol

This paper was supplemented by a demonstration of all the different types of pyrometers, showing the different uses for them. Mr. Bristol in his paper reviewed the field historically: One—In 1782 Wedgewood in England used a pyrometer to measure the temperature in his two kilns in his potter's work. It was based on the contraction of clay at high temperatures. Two—Seger cones were used for pyrometers in the ceramic industry, these cones having various degrees of fusability. Three—In fusion pyrometers use was made of the different known fusing points of different metals. Four — Metallic-expansion pyrometers once used were based on the expansion of metals at different temperatures or the differential expansion of two metals fused together. Five—Heat-conduction pyrometers made use of a current of hot water of known temperature flowing at a constant rate through a tube in a furnace, the increase in temperature being the means of measuring the temperature in the furnace. Six—In specific-heat pyrometers a body of metal of known weight was transferred from the furnace and plunged into water of known weight and temperature, and the increase in temperature of the water was made the means for measuring the temperature of the metal. Seven—In air-gas pyrometers the expansive force of air or gas at the temperature of the furnace was noted and a scale of temperatures calibrated in accordance thereto. Eight—Optical pyrometers depended on the photometric measurement of radiation from substances heated. Another pyrometer of this type depended on the polarization and refraction of light by means of Nocol prisms. Nine—In radiation pyrometers the heat from the body is focused on a thermo-couple by a concave mirror. This type of pyrometer can be used commercially up to temperatures of 3,000 F. Ten—The electric-resistance pyrometer made use of platinum wire wound on clay, but later mica was substituted for the clay and the Wheatstone bridge introduced for compensating work. This type is generously used today in commercial work. Eleven—The thermo-electric pyrometer is the one on which Mr. Bristol based the remainder of his paper and is the type used in the heat-treatment departments of many of the motor car factories today. It depends on the phenomenon that an electric current is produced when opposite junctions of two dissimilar metals or alloys are at different temperatures. Two dissimilar metals thus joined are known as an electric couple. The first electric couples used were platinum and

T. V. BUCKWALTER—ELECTRIC TRUCKS ALLOWED FOR RAILROAD MEN'S USE

palladium, but now platinum and platinum-rhadium are employed. These couples depend for operation on the difference of temperature between the hot and cold ends. The electric motive force of the electric current developed in an electric couple is based on the cold end of the couple being kept at 0 degrees C. In order to do this temperature compensators of one kind or another are used.

At present the thermo-electric pyrometer is made in many different styles to suit different needs. In steel heat-treatment ovens the end of the couple is inserted in the furnace and the registering pyrometer can be on the wall in any part of the laboratory, or if needed in the superintendents office. Pyrometers are made for foundries in which the temperature of a pot of molten metal can be taken by sim-

L. W. WHITCOMB—ONE MORE CORK INSERT FOR ME

ply dipping the end, of what appears to be a long rod, into the metal, the instrument immediately recording the temperature and just as quickly dropping to 0 when the rod is withdrawn. The recording pyrometer is largely used and is one in which a needle traces on a paper disk the exact temperatures of any oven. These disks are smoked, and by dipping in a preparation the impression on the disk is made permanent and the disk can be kept indefinitely.

This paper provoked the most general discussion, as all of the engineers know that with nickle, vanadium, chrome nickle and other alloy steels the heat treatment is so delicate that a variation of 25 or 40 degrees will entirely spoil the metal undergoing treatment.

Discussing pyrometers, Henry Souther congratulated Professor Briscoe on the practical factory pyrometer which he had brought out, and stated that today the pyrometer is to the motor car industry what the thermometer is in every day life, the pyrometer now being so practical as to be put in the hands of regular factory artisans. Common sense must be used in installing pyrometers so that accuracy is obtained. A few years ago mention of the pyrometer at a factory meant practically a discharge from duties, but today it is as essential as the micrometer.

Heat Treatment of Steels—Henry Souther

The writer had published in complete form a pamphlet, which was given to all of the members of the society, setting forth the different heat treatments needed for such alloy steels and carbon steels as may enter into the make-up of a car. Mr. Souther did not read any of these specifications, but spoke regarding them as follows: "The pamphlet is a concise table of specifications of steel and the heat treatment they require for motor car use. It is impossible to put into one pamphlet all facts relative to heat treatment of steels, and those given are standard to go by. Where additional treatment could be given it would mean fancy prices and a long wait for delivery. Specifications for alloy steel are frequently compiled by engineers which are impossible, and steel mills should refuse the orders. Motor car manufacturers require quick deliveries, and the specifications are suited for such work. During the last 10 years basic open-hearth steel has come to the front and steel manufactured under the Bessemer process retrograded. Open-hearth steel is used today in the better class of work, but it is not good enough for all car parts, so that the use of the electric furnace is a real advance in steel work. The heat treatment of steel is the most delicate thing in conjunction with motor car work, but fortunately there are men developing in the steel factories who understand every detail of heat treatment and, fortunately, these men are gradually drifting into the motor car industry. It is a fact that because a car maker announces he uses chrome nickel steel that this is no criterion that parts made out of such are strong. If the steel has been properly treated they are, but if the temperature has not been kept at the exact point for the required length of time, and if the quenching has not been satisfactorily done, the steel will be no better than a poor grade of carbon steel. Some gearset gears and shafts require special treatment because a critical point, such as a square corner or flange, has to be most delicately handled, and if the workman is not an adept failure will result. The old-time idea that only low-carbon steels can be carbonized has exploded. A 50-point carbon steel may be carbonized, but it would call for much different treatment than a 10-point carbon steel. It is rare that 50-point carbon steel is carbonized, as there is nothing to be gained, and when carbonized it is harder to machine. It is better to work on 25 and 30-point carbon stock, as they will forge more readily, the heat treatment is easier and machining is also easier."

Mr. Coffin asked Mr. Souther regarding the possibilities of new motor car steels being brought out within the next 6 months, to which Mr. Souther stated that

A. F. SHORE TESTING THE HARDNESS OF STEELS

W. H. BRISTOL—THE PYROMETER FOR MINE

the steel manufacturers are daily looking for alloy steels which will be reasonable in price and have a wider range of heat treatment. By wider range of heat treatment is meant as follows: In heat treatment chrome nickel steel the temperature must not vary more than 30 or 40 degrees, and the steel makers are looking for a steel in which the temperature can vary much more than this without injury. One steel is at present being experimented with; it is obtained in a mine in Cuba and the ore contains both nickel and chromium. This new ore goes through the blast furnace and rolling mills without any more difficulty than the ordinary ore, which of course means a cheaper alloy steel. When heat treated it practically duplicates 20 carbon, with 3½ per cent nickel added. This steel should help to decrease the cost of cars because of it being cheaper and so much easier to handle.

H. S. WHITE—I'M SICK—1,600 SIZES OF METAL TUBING IN ONE CAR

SOME OF THE MEMBERS WHO ATTENDED THE SUMMER MEETING OF THE SOCIETY OF AUTOMOBILE ENGINEERS

1—J. A. Crowley, 2—House, 3—H. M. Swetland, 4—H. G. McComb, 5—D. F. Graham, 6—E. J. Stoddard, 7—H. H. Brown, 8—H. F. Donaldson, 9—G. W. Vaughan, 10—G. W. Gaidzik, 11—Aull, 12—Berger, 13—G. E. Merryweather, 14—Bloss, 15—H. Souther.

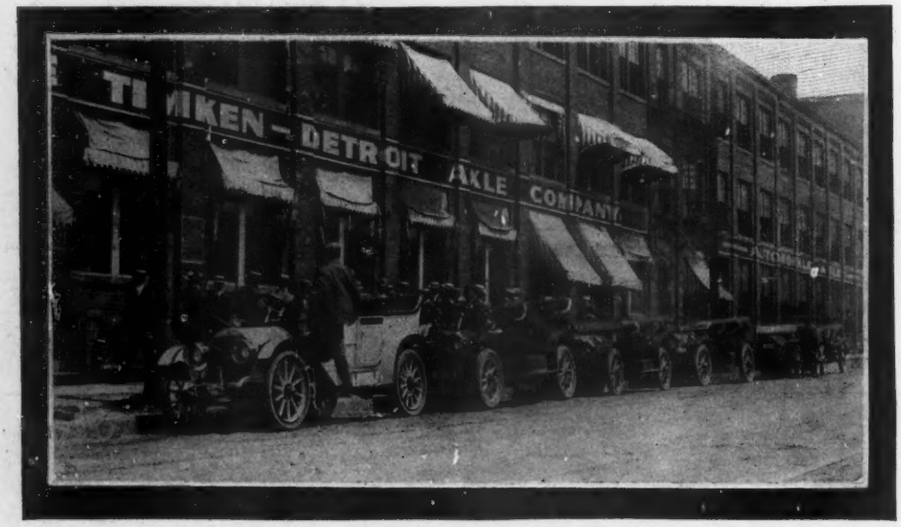
This paper was published in Motor Age July 21, pages 31 and 32. The discussion on this paper was varied. Henry Souther, after 3 years' use of the instrument, stated there was more in it than appeared on the surface. In using this scelerscope it is necessary to have the surface of the metals under test free from grinding scratches, otherwise the results will be misleading. One apparent inconsistency of the instrument was that testing a steel ball 1½ inches in diameter, the reading was 110 hard, whereas testing ½-inch ball of the same hardness the reading was 60. This provoked the discussion that the instrument did not show the absolute hardness of metals. Much depended on the foundation on which the instrument rested. It was also claimed by men who had used the instrument that it did not take into consideration the thickness of case hardening. Walter Baker stated that a piece of steel which showed a hardness of 80 on this instrument could be filed, and another piece showing a hardness of 60 could not be filed. He could not understand why an alloy steel 80 hard would file and a carbon steel 60 hard would not. Much doubt existed in the minds of many of the engineers regarding the exact field of usefulness of the instrument, and as Mr. Shore was not present several questions were asked which are to be answered at another meeting.

Standardizing Bearings—B. F. Graham

The object of this paper was to show the variation in practice among different makers in fitting bearings to cars. Mr. Graham had distributed pamphlets showing the bearings fitted on different makes of cars weighing 1,500 pounds, 1,500 to 2,000 pounds, 2,000 to 2,500, 2,500 to 3,000, 3,000 to 3,500, 3,500 to 4,000, 4,000 and over, taxicabs and electrics. The results showed that in these different classes bearings of a dozen different sizes were used on cars of approximately the same weight and horsepower. This formed the basis of Mr. Graham's comment on the paper, which was in brief as follows:

Howard Coffin

"What can be done towards standardizing bearings on motor cars? The tabulations show the weights, horsepower and size of ball bearings used in 121 models. This tabulation shows the necessity of a text book on bearings for engineers. You will note that on cars of the same weight bearings vary unreasonably. The necessity of standardizing ball bearings for such parts as front wheels, main shaft of gearbox, countershaft of gearbox, differential, rear wheels and motor shafts, as follows: First—Standardizing would mean a reduction in the number of different sizes of bearings that the bearing manufacturers would have to make. Second—A reduction in the number of sizes made would mean a cheapening in the price of bearings in that bearing manufacturers would build the standard sizes in greater quantities instead of having to waste time and divert factory energy in bringing out forging for unreasonable sizes. Third—Fewer sizes would mean more prompt shipment. As it is, car makers using their own special sizes, which are 2/1000 of an inch off standard, are compelled to wait on orders and also



Engineers Visiting Timken Company During Convention

SOME OF THE MEMBERS WHO ATTENDED THE SUMMER MEETING OF THE SOCIETY OF AUTOMOBILE ENGINEERS

16—Fred Tone, 17—B. B. Neuteboom, 18—J. Coapman, 19—Hall, 20—A. Holmes, 21—H. B. Anderson, 22—F. D. Howe, 23—T. V. Buckwalter, 24—Bentley, 25—H. G. Chatain, 26—E. T. Birdsall, 27—J. P. Lavigne, 28—Dean, 29—A. C. Bergman, 30—Smith, 31—W. H. Van Dervoort, 32—H. K. Holsman, 33—H. Vanderbeek, 34—McGeorge, 35—C. F. Clarkson.

Coker Clarkson.

to pay a higher price. With fewer sizes every manufacturer would be able to buy his supplies out of a standard stock.

"The possibilities of standardizing bearings rests entirely with the engineers. It is possible to use fewer sizes and yet maintain the status of construction. I have seen within a few months the design of a standard gearset with six bearings where only two different sizes were used, and also a floating rear axle of eight bearings where only three different sizes were used, and in both cases the design was good and easily manufactured."

The following table shows the general scheme of tabulation used by Mr. Graham:

CARS 1,500 TO 2,000 POUNDS

Halladay, models E, F, and G; Pioneer, model B; A-B-C, model 0; Regal model F; Overland model 39 and 40; Franklin model G; Courier models 10, A, and 1.

TYPE OF BEARING.

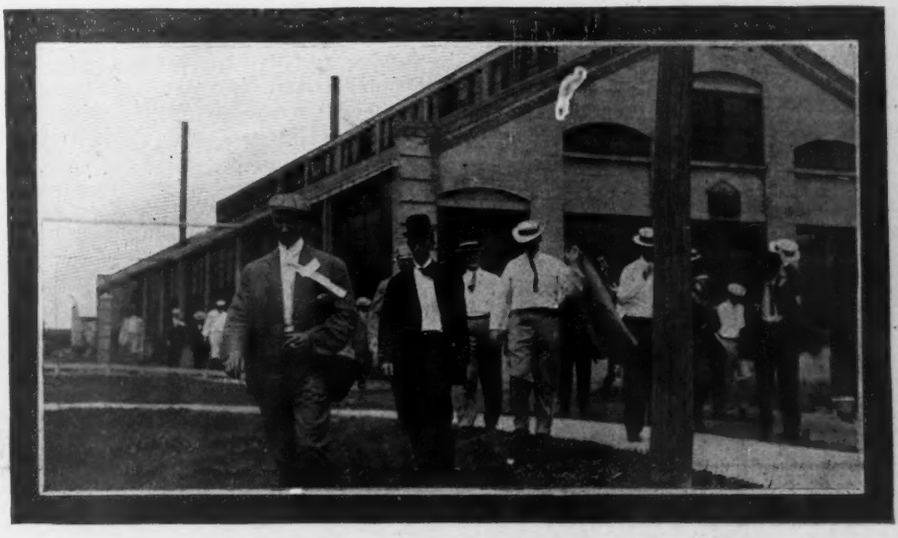
Annular and roller	2
Annular, and cup and cone	5
Roller, and cup and cone	3
Roller	1
Cup and cone	1

Position	Maxi.	Min.	Av.
Front wheel, outside (balls)	½"	½"	½"
Front wheel, inside (balls)	⅝"	⅝"	⅝"
Semi-floating, rear axle, outside	406	406	308
Differential	207	207	305
Drive pinion	307	307	307
Gearset, rear	307	307	307
Gearset, front	209	208	306.6
Gearset, countershaft	305	305	305

Mr. Graham stated that there was absolutely no attempt at the present time towards standardizing plain crankshaft or connecting rod bearings for engines. At the end of the discussion a chart with a rotary center was given out, showing the size of annular ball bearings of the single and double type for the different parts of cars of different weights.

Grinding Gears—F. A. Ward

This paper was an exposition of the practice of grinding gears to reduce noise, the speaker's main platform being that noise in gears is reduced in proportion as the correct form of the tooth is reached. Mr. Ward stated in part: "A cut gear is perfect after cutting, but may not be perfect after heat treatment. No matter how carefully the machining process may be carried out, the heat treatment is sure to interfere with the accuracy of the gear, with the result that noise is generated. It is because of this that grinding of gears after heat treatment is necessary. For grinding gears the form of the tooth to give perfect mesh is calculated on paper, this then worked on a metal templet, and then a mould is made to control the action of the grinder. The most important feature in gear manufacture is the curve of the tooth, and as you approach the perfection line you attain noiselessness in gears. In order to grind gears after heat treatment the same amount of extra material is left as is done with grinding a shaft, namely, .012 inch. There is no difficulty in getting the grinding wheel that will stand up against the hardest steels used in gears. There are several points in favor of grinding gear teeth, which puts grinding above the cutting method. Grinding, in the first place, is done after the hardening, and the grind-



Engineers Visiting Plant of Detroit Steel Products Co.

SOME OF THE MEMBERS WHO ATTENDED THE SUMMER MEETING OF THE SOCIETY OF AUTOMOBILE ENGINEERS

36—H. E. Coffin, 37—L. W. Whitcomb, 38—T. J. Fay, 39—G. E. Franquist, 40—F. P. Nehrbas, 41—D. T. Brownlee, 42—H. H. Kennedy, 43—C. W. Hatch, 44—G. W. Dunham, 45—D. Fergusson, 46—H. J. Edwards, 47—Thomas, 48—B Ford, 49—Kendall, 50—V. G. Apple, 51—W. P. Kennedy, 52—Bowman, 53—Steele, 54—Baker, 55—W. F. Abel, 56—Kirwan, 57—W. Graham, 58—M. T. Lothrop, 59—Fullick, 60—J. A. Mathews.

ing wheel works better on a hard surface than it does on a soft metal, which may gum the wheel. In grinding gears first a rough grind or cut is taken off; the grinding wheel is then reformed and the finishing cut taken.

"In the manufacture of gears, which are proposed to be ground after heat treatment, the maker should leave a full thickness across the gear tooth. A large tooth will be formed more in heat treatment than a small one. It does not call for special gear-cutting machines in any factory where it is the intention to have the gears ground after heat treatment."

In response to an inquiry by Howard Coffin regarding cast gears, which cannot be machined but must be ground, such as manganese-steel gears, Mr. Ward stated his company was producing a large grinding wheel for such gears. Machines are also being developed for grinding bevelled gears.

In reply to a question by Designer Ferguson as to whether grinding gives a better gear, the speaker stated that in grinding gears there is little strain on the tooth, whereas in gear-cutting the cutter will waver, keeping away from hard spots, so that it is impossible to finish gears with tools as with a grinding wheel. The most satisfactory gear for a gearset is one with six pitch and 14½-degree pressure angle. A five-pitch tooth is good, but requires a heavier construction.

Standardizing Car Tubing—H. S. White

The speaker had prepared a tabulation showing 300 standard sizes of gauges of tubings which should be suitable for motor car work, and as these sizes had been passed upon by the different tube manufacturers, he thought it would be best for the society to adopt them. Mr. White said: "This table shows sufficient standard sizes and gauges to suit any motor car demand. Today we are furnishing 300 different sizes to car manufacturers, and in our effort to supply this demand our factories are upset constantly. Tube manufacturers are willing to unite to satisfy the demands of car makers, and if car makers will unite and adopt standard sizes it will be possible to give quicker delivery and tubing at a reduced price. Car makers today are buying better tubes at from 50 to 100 per cent reduction than they did 5 years ago. In the pipe trade standards have been adopted, and if you want to buy pipe you buy the standard sizes, and a manufacturer will not make special sizes to suit you.

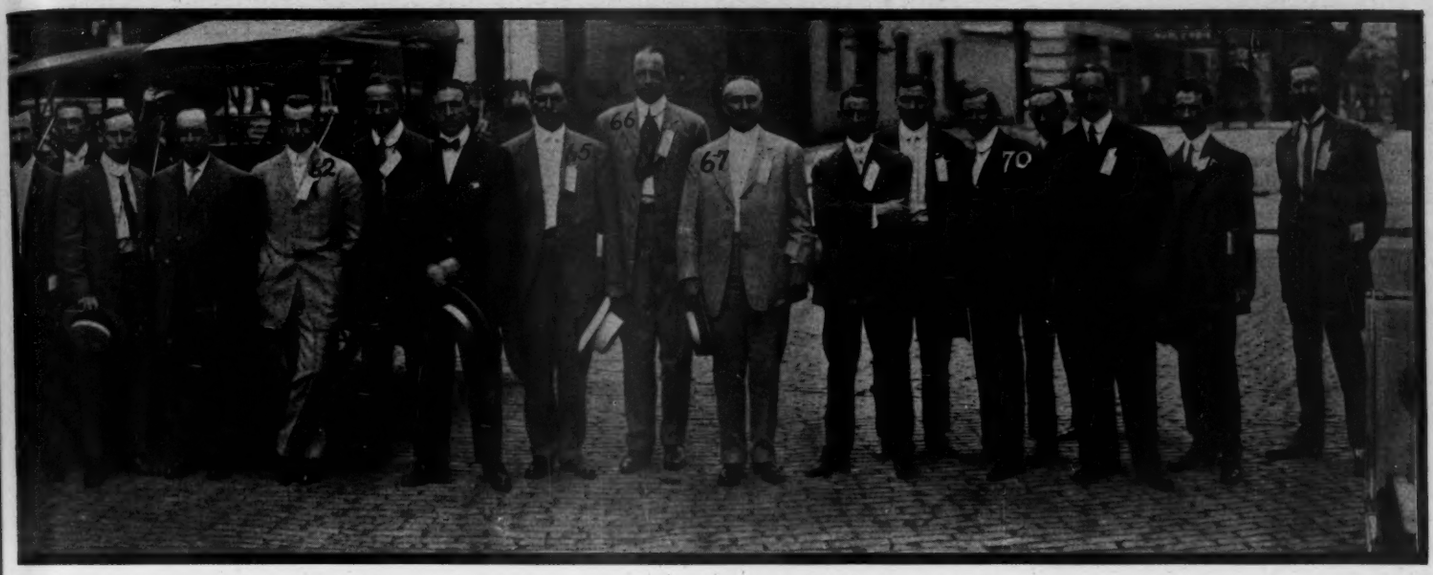
"The benefit of standard sizes in gauges are as follows: Quicker deliveries, higher quality of tubing, ability of any manufacturer to buy rush orders from stock, less danger of accumulating dead stock from year to year, and the possibility of better prices.

W. H. Bristol

"There is considerable variation in seamless tubing at the present time, and the finished product is not a finished product in respect to diameter and gauge, as is the finished shaft of the gearset. The variations are practically as follows: Tubes under 2 inches in diameter have an outside diameter, which varies from .005 minus .005 plus. Tubes over

Engineers at Packard Plant—Photograph Was Taken Upon Entering the Plant and Given to Each Engineer Upon Leaving

SOME OF THE MEMBERS WHO ATTENDED THE SUMMER MEETING OF THE SOCIETY OF AUTOMOBILE ENGINEERS



61—Welfare, 62—B. Bailey, 63—Marburg, 64—Stern, 65—W. H. Staring, 66—A. J. Slade, 67—W. C. Baker, 68—H. W. Alden, 69—Hinkley, 70—W. H. Cameron, 71—H. S. Baldwin, 72—A. L. Dixon, 73—B. A. Gramm.

2 inches in diameter vary from .010 minus to .010 plus. The walls will rarely vary more than 10 per cent of their thickness. I predict that you can cut the standard sizes from 1,600 as manufactured in the years 1905 and 1907 to fewer than fifty in the year 1912 and have equally good car construction."

Henry Souther

In this paper the various types of valves employed, such as poppet valves, rotary vales, piston valves and sliding sleeves, were given. The paper proved so exhaustive that a synopsis could not be included here, and the complete publication of it will be made at an early date. Mr. Batzell at the conclusion of his paper mentioned several general deductions relative to valves which were as follows:

"The quantity of fresh charge bought into the cylinders during the inlet period depends as much on the character of the valve-opening diagram as on the actual maximum size of the opening.

"The long period of inlet opening is necessary only in so far as it helps to obtain big inlet ports and better cam design. A late inlet closing up to certain limits has no great direct influence on the motive power under average conditions, because the additional charge entering during this period is small.

"The openings obtained with poppet valves are smaller and their diagrams of opening are less favorable than with most of the other valve systems. Poppet valves, of large diameter and small lift, are preferable to poppet valves with higher lift and small diameter, because with the same maximum size of opening the larger valve depending on the cam will have a better opening diagram.

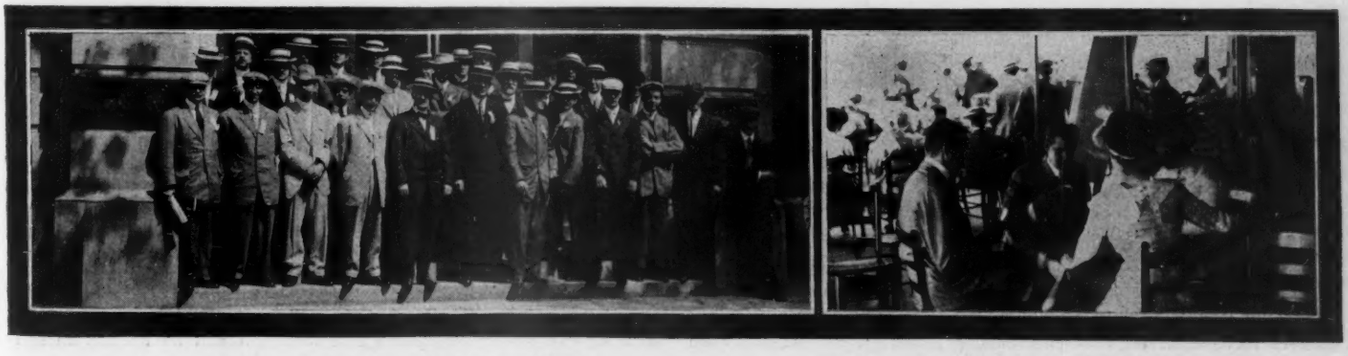
"Rotary valves driven at constant speed all show the same character of opening diagram, and the one which, besides giving the desired size of opening, permits the simplest and most reliable construction and is therefore to be preferred.

"The Knight sliding-sleeve motor must be considered superior to the poppet-valve type, but not superior to some rotary-valve constructions.

"From the standpoint of efficiency, which latter is favored by a hemispherical combustion chamber, poppet and piston valves located in the cylinder heads at an angle are nearest to the ideal. The Knight motor may be considered next best. A good form of explosion chamber is obtained also with the other rotary-valve systems with cylindrical or disk valves. Motors with poppet or piston valves, located in side pockets, have the greatest combustion chamber cooling surface. These constructions also are unfavorable to quick ignition of the charge and must be considered the worst from the standpoint of thermal efficiency." This paper provoked widespread discussion, as follows:

Mr. Coffin: "On motor valve mechanism, it seems to me, there are several distinct objects, any of which we can set as a mark for ourselves in valve customs. Some of us want quiet valve mechanism; others

(Continued on page 22.)



Engineers Visiting E-M-F Plant Friday

Recreation on Shipboard Friday

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The 1910 National Road Race

AMERICA is to have national stock chassis races for the coming autumn, these races to be run on the Elgin, Ill., course, within 40 miles of Chicago, on August 26 and 27, and to be conducted under the immediate supervision of the Chicago Motor Club, an organization which from the beginning has been a leader in the conduct of events. The national stock chassis races come this year at a specially opportune moment, when they will attract the attention of the entire nation at a time when the business is rather slack and so prove an invaluable boost to the industry. Road races have ever been big advertisements for the industry, and especially when conducted within striking distance of so big a center as Chicago or New York. To the manufacturers the national races for August have a special significance, owing to the harvest lull and what might be called vacation lulls that are sweeping over the country at the present time. Several factories are temporarily shut down to take the summer inventory and in others the entire factory force is not engaged. Because of these conditions the coming races will prove an admirable method of attracting the attention of the public to the industry just at a time when dealers are looking for the fall business to open up.

THERE is one more reason at the present time why every attention and support on the part of the manufacturers should be given these national races and that is the antagonistic action that many of the banks are assuming at the present time towards manufacturers and agents. Several banks seem to think that the demand for the car is not going to be what it was and further claim that the supply of cars should be vastly limited. As a matter of fact, America is literally filled with people eligible to buy cars and who as yet have not discarded their horse systems of transportation. The attention of the motor car must be brought to these people, and there is no other time when manufacturers should bring the attention of the cars before the public with more vim than in seasons when outside forces are trying to muzzle the industry. Makers must keep in the public eye, and national road races have always been one of the greatest means for achieving this end.

THE present stock chassis races will appeal to many makers with special significance now because of the actions of the chairman of the contest board of the American Automobile Association in recently defining without any doubt the status of stock machines. The American buyer has been craving for stock cars, and now that he has been given every assurance that only stock cars are competing in these national events, he has a feeling of satisfaction that he will not have to compete against any special racing machines and that every maker, no matter how small, will have an even chance in the contest. Many makers have held out of contests on the ground that they did not care to compete against non-stock models, but now that the last vestige of such trouble has been removed there should be a general rallying to the stock car race, with the great object in view of everlastingly keeping the motor car before the attention of the public, because for 1911 the sale of cars will be directly in proportion to the publicity given the car by way of racing, reliability contests and other means of publicity. Already many makers have realized this call to the industry, and it is to be hoped that all contests will be well supported.

The Influence of the Engineer

LAST week the 3-day meeting of the Society of Automobile Engineers in Detroit marked a high-water mark in the history of this organization in that over 150 motor car and accessory engineers visited the premier motor car manufacturing city in the world and listened to the reading and discussion of more than a dozen papers of an engineering nature that had a direct bearing on the motor industry. Up to the present the attendance at these engineering meetings has not been what it should have, but under the present régime of President Howard Coffin and General Manager Coker Clarkson scores of new members have been taken in and the organization given fresh life. All of the papers read were carefully prepared ones, dealing with different phases of the industry, and the discussions that followed the reading of each were unmistakable proof of the fact that today each factory engineer is working for the best that he can produce, and he is also in search of the latest information in engineering.

ONE phase of the 3-day conference was the overwhelming tidal wave towards standardization that was shown on every hand. Nothing more was needed than the reading of a couple of papers on this subject to stir all of the members to the working point on this subject. At present the work towards standardizing tubings and bearings, used in motor cars, is the immediate hope of the society. There are today over 1,000 sizes of tubing specified in the hundred or more motor cars at present being built and, according to the tube makers, fifty sizes would suffice and give cars as good as today. There is in many engineers a most unnecessary desire to have everything in their car different from that in the other man's car, and this has evidenced itself very much in the matter of tubing. There are engineers who have insisted on tubing of a size which varies scarcely $\frac{1}{16}$ inch from the standard and which size is not used by any other maker. The result is that special sizes have to be made, and with orders for special sizes coming in from a score of fastidious engineers the topsy-turvy state of the tube factories can readily be imagined. With orders for over a thousand different sizes of tubings the tube mill is not able to make deliveries as fast as it would if it only had to make upwards of sixty standard sizes of tubes. Slow manufacture at the tube mills means higher prices, and higher prices mean higher prices for the cars by the makers. But it is not only a matter of price, but loss of time on the part of the car owner whenever he has to replace one of these special sizes of tubing. When the replacement is needed it may be that he is miles from his dealer or the factory, and worse still it may be that the car has not been manufactured for a season or two and that the tube mill has stopped making that special size; at any rate, the owner is going to have a much longer wait for his piece of tubing than he would have if only standard sizes of tubing were used so that these sizes could be bought in any hardware store the same as standard sizes of gas piping. When the Society of Engineers has accomplished this first great step in standardization it will have not only reduced the price of motor cars to the consumer, but it will have demonstrated to the industry the real dollar-and-cent value of standardizing parts, and the maker will by that time have realized that cheap manufacture is a big thing in the car world today, when competition is getting greater every day and when salesmanship will be needed in selling cars in the future.

BIG FIELDS LOOKED FOR IN NATIONAL RACES

CHICAGO, Aug. 3—Increased interest is being shown in the national stock chassis road races at Elgin, which will be run August 26-27 by the Chicago Motor Club, now that it is positively known that Lowell is out of it. This leaves a big gap in the road race circuit and naturally gives Elgin a greater prominence. It is not that Elgin really needs any boosting of this sort, for the makers are realizing what big events the August racing will be, and while they have not as yet forwarded many entries, there is every indication that by August 20, when the list closes, there will be full fields in each of the four events. One of the surprises of the present week in the entry line was the nomination of a model T Ford by the Ford Motor Co. for the Fox River trophy, the race for cars of the 161-230 class. This entry was made through the Chicago branch, Frank Kulick being named as driver. While no official statement accompanied the nomination, the entry is taken to mean that the Ford Motor Co. has been won back to the competition game, and that from now on the company will be prominent not only in racing but in reliability runs and hill-climbs. While the Chicago Motor Club has but few entries in hand at the present moment, it has many prospects in sight. Arthur Greiner, the amateur, has named a National for the Elgin National trophy race, and the National Automobile Co., of Chicago, has entered a National for the Illinois trophy. A Cole, with Endicott driving, has been named by telephone from Indianapolis, while assurances are given by the Alco, Lozier, Benz, Renault, Marmon, E-M-F, Parry, Falcar, Black Crow Oldsmobile, Herreshoff and many others that they will make nominations. The Lozier, which has been out of road racing, like the Ford, for a couple of years, has gone so far as to go after headquarters at Elgin, which is taken as a guarantee of the company's serious intentions. One camp already has been established at Elgin—the National—and it is expected that next week will see most of the best sites taken.

ELGIN NATIONAL TROPHY, OFFERED IN NATIONAL STOCK CHASSIS RACE

The Elgin Automobile Road Racing Association is doing its work well. It has completed its arrangements for seating the vast crowds expected and is in a position to care for as many people as come, for it is an easy matter to add more sections as they are needed. The popular-price idea has taken well and at 50 cents, $1 and $1.50, it is thought there will be little difficulty in selling all the 7,000 seats. But at any rate no one need fear of being unable to get a comfortable seat. The prize situation is well in hand and at the present time the Gorham company is at work on the $4,500 Elgin National trophy, the design for which was submitted this week. It will be one of the finest motoring trophies ever put up, being a classic vase 3 feet 8 inches high above the pedestal. It is a two-handled cup, the main decorations being laurel oak and water leaves. The cup is designed to take six wreaths with inscriptions and will have two panels, on one of which will be a motor racing scene, while on the reverse side will be the inscription, "Elgin National Trophy." On the neck of the cup is

the figure of Father Time. This trophy has been hung up by the Elgin National Watch Co., of Elgin.

Chairman Harry T. Clinton and his associates on the contest board of the Chicago Motor Club today selected the officials who will handle the national stock chassis road races, as follows:

Honorary Referee—C. H. Hulburd, of Elgin, Ill.
Referee—David Beecroft, president of the Chicago Motor Club.
Judges—F. C. Donald, Chicago Motor Club; Everett C. Brown, president of the Chicago Athletic Association and president of the Amateur Athletic Union; T. J. Hyman, second vice-president Chicago Automobile Club; W. C. Thorne, Chicago Athletic Association; W. F. Grower, Chicago Athletic Association; A. J. Banta, Chicago Automobile Club; F. W. Jencks, president Elgin Automobile Road Racing Association; G. E. Hunter, Elgin, and Frank H. Trego, Detroit.
Starter—Fred J. Wagner, of New York; assistant starter, Oliver G. Temme, Chicago Motor Club.
Clerk of the Course—Harry T. Clinton, Chicago Motor Club; assistants, W. J. Zucker and J. S. Woodworth.
Technical Committee—F. E. Edwards, Berne Nadall, Otto von Bachelle, Chicago Motor Club.
Timers—C. H. Warner, of Beloit, Wis.; J. P. Frisby, R. T. Laughlin, H. W. Cooper, Chicago Motor Club.
Chief Checker—John H. Kelly, Chicago Motor Club; assistants, L. Z. Sheldon, Ralph Hoagland, W. Nussbaum, Frank Sparks, Ed Guston, O. L. Foote, Hosmer H. Allen, Lyle Miller and L. R. Campbell.
Chief Scorer—Charles E. Gregory, Chicago Motor Club.
Chief Flagman—Frank B. Wood, Chicago Motor Club.
Military Aid—C. A. Tilt, Chicago Motor Club.
Chief Announcer—L. B. Sanders, Chicago Motor Club.
Referee's Car—E. C. Patterson's Stearns.
Chief Electrician—Al Adams, Elgin.

At the same meeting it was decided to again postpone the club's annual hill-climb at Algonquin, Ill., the new date selected being Thursday, September 15. This action was taken because it was found that it would be possible to finish by September 1 the artificial hill which will be used for the standing start climb. The club has had trouble getting Perry hill for this, that grade being in another county. The Algonquinites, however, have promised to build a special hill 1,000 feet in length and averaging 12.38 per cent in grade and which will be one of the stiffest propositions a motor car ever has been called upon to tackle. The rise from the bottom to the top will be 123.95 feet. Ten teams and twenty men will start at this tomorrow and the hill will be done by September 1. The climb had been set for August 12.

BIG FIRE IN PITTSBURG

Pittsburg, Pa., July 30—More than $100,000 damage was done by a fire in the motor center of the east end Wednesday. The fire started in the building of the Chase Motor Wagon Co. at 5987 Center avenue, which it practically ruined. The garage of the Liberty Automobile Co., adjoining, was also burned and much damage was done to the upper floors of the sales building of that company, where twenty-eight machines were stored. Three large cars were also burned in the building of the Chase Motor Wagon Co.

Hoosiers Grow Enthusiastic Over

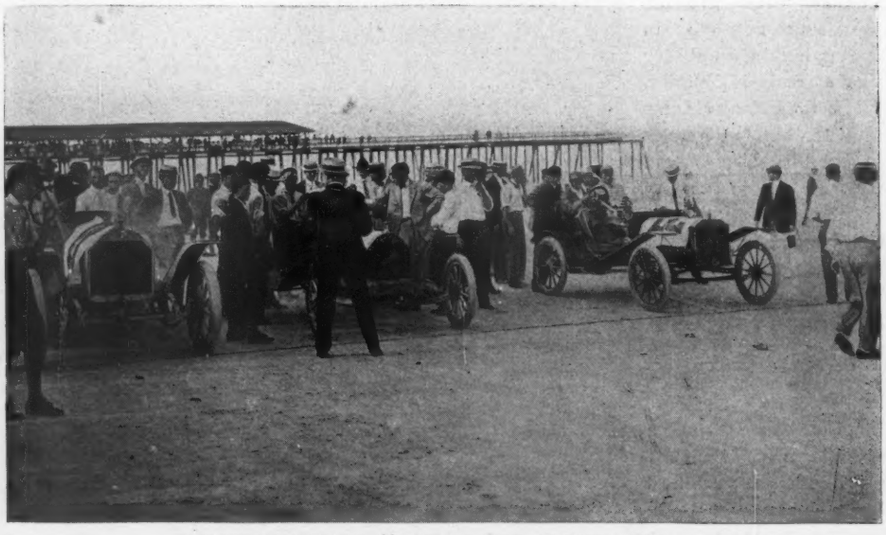
SOUTH BEND, Ind., Aug. 1—The Northern Indiana Good Roads Association met at Elkhart last Friday and discussed the subject of good roads to a considerable extent, having for one of the principal speakers H. M. O. Eldridge, of the department of agriculture at Washington. The meeting was called to order by Vice-President Lemuel Darrow, mayor of La Porte, who spoke briefly upon the objects of the meeting. He declared that good roads as a subject for development had been sadly neglected in northern Indiana, and that from a knowledge of this situation the Northern Indiana Good Roads Association had been organized. "Many thousands of dollars have been spent on our roads each year," he said, "and we have no lasting evidence of it, due largely to the fact of incompetent directing. It is not the object of this body to secure benefits for the motor cars; the greatest good will redound to the farmers."

E. M. Chester, mayor of Elkhart, gave the address of welcome, to which L. P. Hardy, of South Bend, replied. Mr. Hardy especially expressed the gratitude of the chamber of commerce of South Bend, which was represented at the meeting and which feels the responsibility for the formation of the association. Mr. Eldridge prefaced his address with the remark:

"I know far more of bad roads than of good ones, as I have seen so many more of them." In his ensuing sentence the speaker declared the good roads subject is of more importance than that of conservation, of which so much is heard at this time. "The country must be developed and the establishment of good roads will be a long step in this direction. I firmly believe that if 25 per cent of our citizenship would move into the farming districts our problem of the high cost of living would be solved. And if we establish and maintain good roads this percentage will take up a life in the country. The trolley lines have sent many back into the farm, and good roads will send many more. There are three important phases of this subject: Do you want good roads? How will you raise the money for them? How will you build them? As an argument for good roads let me state that 125 pounds of force are necessary to draw a ton over the best dirt roads; 75 pounds are necessary to draw the same weight over a gravel road, and 55 pounds are employed in drawing the same weight over a macadam. In ordinary weather a macadam road is three times better. And a strong feature in road building is to have level highways. Roads need constant attention. It is far better to have one man at work on them for 365 days than 365 men for 1 day. I doubt if any lasting good can come from the old-fashioned idea of getting out for a day or so, scraping the dirt and heaping it

COMING MOTOR EVENTS

August 6—Track meet of Quaker City Motor Club, of Philadelphia.
August 16-27—Munsey tour.
August 17—Track meet at Cheyenne, Wyo.
August 26-27—Road races of Chicago Motor Club at Elgin, Ill.
August 31-September 8—Reliability run of Automobile Club of Kansas City, Mo.
September 2-3-5—Speedway meet at Indianapolis.
September 3—Reliability run of North Wildwood Automobile Club, Wildwood, N. J.
September 5—Track meet at Wildwood, N. J.
September 5—Track meet at Cheyenne, Wyo.
September 5—Road race of Denver Motor Club, Denver, Colo.
September 5-10—Track meet at state fair, Minneapolis, Minn.
September 7-9—Four-day reliability run of Automobile Club of Buffalo.
September 9-10—Track meet at Providence, R. I.
September 10—Automobile Club of San Francisco road race, Golden Gate park.
September 10—Mount Baldy road race, Los Angeles, Cal.
September 10-11-12—Track meet at Seattle, Wash.
September 15—Annual hill-climb of Chicago Motor Club at Algonquin, Ill.
September 17—Track meet, Syracuse, N. Y.
September 18—Track meet at Syracuse, N. Y.
September 24—Santa Monica road race of Licensed Motor Car Dealers of Los Angeles, Cal.



INTERESTING BEACH RACES ARE RUN AT PABLO, FLA.

the Subject of Better Highways

in the center of the road until the place looks like a sweet potato row. I know how all this is done, for I have helped at it myself working out my road tax. We didn't much care how the work was done; we got credit just the same. I believe the labor statutes should be abolished in Indiana and that every one should be made to pay his road tax, dollar for dollar. This money should be spent judiciously and someone placed in charge of the road work who knows his business. Put fewer men in charge and pay them well."

In speaking of some phases of convict labor in building roads Mr. Eldridge had praise, but said he thought these men should be employed in preparing the stone rather than in the actual work upon the roads. "Some twenty-five or thirty states are now giving financial aid to the movement," continued the speaker, "and have provided for a skilled engineer to demonstrate scientific road building. Many of these states have appropriated from their treasuries for the case, and no state which has taken steps toward better highways has ever changed its plans. The issuance of bonds may be taken as a method for financing good roads; such would not be an expense, but an investment. Those who are coming after us would help bear the cost and the present generation would get its share of the benefits. In the building of roads there are two rules which should be made certain: Have the road hard and impervious—hard in order to carry its burdens and impervious that its surface may last. And, after all, it is the foundation and not the surface which must withstand the burden. A good gravel road may be secured by covering the sub-grade with a binding 6, 8 or 10 inches deep, well spread. The department of agriculture has superintended the construction of many sample lengths of good road and will, if Elkhart county desires, do the same for you and will send an expert here to furnish the materials, either gravel or macadam. A good motor car road may be built from a foundation of crushed stone spread thinly with liquid asphalt, then a layer of stone, another coating of asphalt and finally covered with screenings. This wears well and in time comes to be a smooth and easy-riding surface."

At this conclusion the speaker was asked the cost per mile for such roads. He replied that 75 cents per square yard was considered the average price, 25 cents more per yard than ordinary macadam. J. C. Crabill, of Indianapolis, secretary of the Indiana bureau for good roads, read a bill which is proposed for legislation. The bill provides for state highway supervision by a commission of three, serving without salary. These shall appoint a state highway engineer at a salary not exceeding $3,000, who shall investigate methods of road construction. Twice each year he shall call together the county engineers for the discussion of good roads. A highway engineer shall be appointed from each county and an overseer from each township, the latter's salary not to exceed $1,200 per annum.

COMING MOTOR EVENTS

October 1—Vanderbilt cup race.

October 3—Reliability run of Louisville Automobile Club, Louisville, Ky.

October 7-8—Speedway meet at Los Angeles, Cal.

October 6-7-8—Track meet at Santa Anna, Cal.

October 8—Fairmount Park road race, Philadelphia, Pa.

October 15-November 2—Show in Paris promoted by Aeronautical Society.

October 15-16-17-18—Annual 1,000-mile reliability run of Chicago Motor Club.

October 20-21-22—Speedway meet at Atlanta, Ga.

October 23—Road race, Portola cup, San Francisco, Cal.

October 27-28-29—Track meet at Dallas, Tex.

November 5-6—Track meet at New Orleans, La.

November 6-9-13—Track meet at San Antonio, Tex.

November 24—Hill-climb at Redlands, Cal.

November 24—Road races at Savannah, Ga.

December 1-8—First annual aeronautical exhibition, Chicago Coliseum.

December 3-18—Annual salon of Automobile Club of France.

January 7-14 and 17-24, 1911—Show of A. L. A. M., Madison Square garden, New York.

February 6-11 and 13-20, 1911—N. A. A. M. show, Chicago.

CEREMONY MARKING COMPLETION OF JACKSONVILLE'S ATLANTIC BOULEVARD

BEACH RACES AT PABLO

Pablo Beach, Fla., July 28—With an attendance of between 7,000 and 10,000 people, the first racing on the beach here this afternoon proved to be a great success. The occasion was the opening of the new road between Jacksonville and Pablo Beach. Three events were contested, although six originally had been planned. The opener, for class D cars at 2 miles, was won by W. A. B. Worley in a Hupmobile in 2:55, with Dexter Kelly in a Ford second and J. E. Johnson in a Hupmobile third. F. C. Miller in an Empire was fourth. The distance of the second race was cut from 10 to 7 miles and the winner was Dr. Stinson's Oldsmobile, which covered the distance in 8:36⅕. C. B. McNair's Premier was second; J. J. Ahern's Overland third; H. C. Hare's Marion fourth, and G. T. Parson's Pratt-Elkhart fifth. The third race was at 15 miles and the winner was J. J. Logans' National, which went the distance in 14:27⅗. F. W. King's American, the other starter, did not finish.

RUN RACES ON ROAD

Atlanta, Ga., July 30—The Middle Georgia Automobile Association held its first meet July 26 in Jackson. The races were run on one of the roads of the city and it was patrolled by the Jackson Rifles, a crack military organization of the national guard. The races were virtually time trials, the cars being run the ½ mile against the watch, one at a time. The free-for-all winner was Oldknow, of Atlanta, in his National. His time was :44⅘. Fambro, driving a Hupmobile, was first in class A, time 1:16. In class B W. H. Mallet in a Buick won, time :57⅕. The next race meet of the Middle Georgia Association will be held in Hawkinsville on August 16. As in the Jackson races, the affair will be for stock cars, amateurs to drive. There will be straightaway time trials and two cross-country events.

ATLANTIC BOULEVARD OPEN

Jacksonville, Fla., July 30—One of the most interesting and spectacular events that ever occurred in Jacksonville and the south was the motor pageant through the main streets of this city last Thursday, the first step in the exercises incident to the opening of Atlantic boulevard, the hard-surface road from the city to the sea. Atlantic boulevard now connects Jacksonville, Fla., with the sea, distance of more than 20 miles. This road is made up of cement, bricks and gravel. At several places concrete bridges have been built.

JENATZY TRAVELS AT 133.1 MILES PER HOUR

CAMILLE JENATZY, THE BELGIAN, IN HIS RECORD-BREAKING MERCEDES AT OSTEND

PARIS, July 21—Camille Jenatzy, the Belgian, whose racing career dates back to the very beginning of the battle against old Father Time, is the motor hero of the hour in Europe. He has climbed to the pinnacle of fame by taking away from Barney Oldfield the record of having traveled the fastest of any man living or dead. This feat was accomplished at Ostend where Jenatzy, driving a Mercedes, did the flying kilometer in :16⅕, which is at the rate of 133.1 miles per hour, whereas Oldfield's high water mark, made in a Benz, was 131.72 miles per hour, a record established when Oldfield did his mile in :27.33 at Daytona, Fla., last March. At that same time Oldfield turned the kilometer in :17.04, which equals 131.28 miles per hour. Jenatzy, however, will not be granted the official record because he made only one trial, whereas the rules call for two.

Not satisfied with this, Jenatzy moved on to Boulogne-sur-Mer, where he set a hill-climb mark that is the wonder of Europe. From a standing start, he sent his big Mercedes up a grade that measures .31 mile at the rate of 78.5 miles per hour.

Jenatzy's kilometer in :16⅕ was made at the annual week of the Ostend meeting, a few days ago, but, owing to the fact that the record was made under conditions and circumstances which do not meet the rules and regulations governing world's record trials, the :16⅕ mark will not go down on the official score. Jenatzy, nevertheless, has the European record officially, although this one is marked down at :20⅕, which was made under the regulation conditions on the second day.

This did not end the record-breaking appetite of the Belgian. In the 20 kilometers—12.4 miles—and in the 500 meters—.31 miles—events he clipped seconds off the records, and it is likely that if he had gone after other marks he would also have been as successful. The weather always was fine.

The once winner of the Bennett cup race was the hero of the meeting, although his younger brother, Ferriol, also took a good deal of the honors by having the fastest touring car, a Pipe, in which he also established some world records.

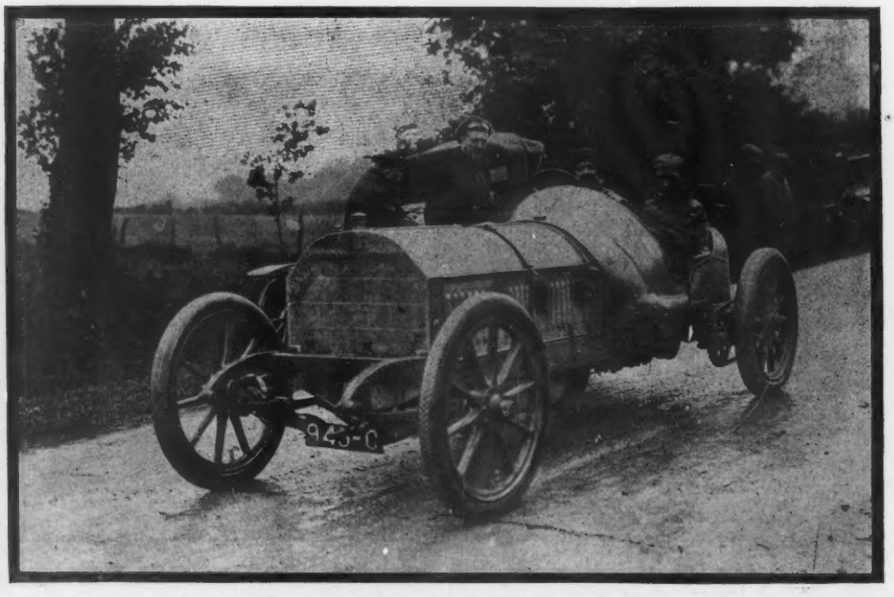
By a strange coincidence both the big Mercedes and the big Pipe had airship motors. The German car had a four-cylinder engine with 6.9 inches bore and 6.3 inches stroke and was stated to be an 180-horsepower car. The motor, so it was said by attendants, is similar to those which the Daimler concern has been making for the Zeppelin airships. The cylinder capacity of the motor was 14.753 liters or 3.89 gallons of gasoline. This was pretty near the capacity of the cylinders of the Pipe which had a four-cylinder motor 6.3 by 7.1, and is similar to the airship motors made by the Pipe concern.

The German cars which came to Ostend in large numbers looked like racing cars. In fact, all of them, whether Benz or Opel, Gaggenau or Bergmann, were the same cars which started in the recent Prince Henry tour and everybody knows by this time that four-fifths of those cars were really racing machines. However, owing to the classification of the cars according to the cylinder capacity and to their bodies, the majority of the racing cars came under the touring car heading and it was no surprise that hardly any Belgian cars succeeded in getting among the leaders, as most of them were strictly speaking touring cars.

The week of racing begun with the 20-kilometer standing start event which really was a double trial of 10 kilometers each time, the course going from Ostend to Wenduyne for the first 10 kilometers and the return trip making the second lap. According to the general classification the eight cars which did best in this 20 kilometers—12.4 miles—race were:

1—Camille Jenatzy, winner, in Mercedes, 6.9 by 6.3. Time, 8:52⅖. This is 15⅘ seconds better than the record established by Jenatzy at the meeting in 1909.
2—Horner, Benz, 4.5 by 6.9. Time, 10:16⅖.
3—Boillot, Lion-Peugeot mono-cylinder, 3.9 by 9.8. Time 10:21⅕.
4—Joerns, Opel, 4.5 by 6.9. Time, 10:49⅘.
5—Mathis, Flat, 3.7 by 6.1. Time, 11:15⅕.
6—Giuppone, Lion-Peugeot mono-cylinder, 3.9 by 9.8. Time, 11:21.

More interesting was the second day of the meeting when the kilometer flying and standing start and the 500 meters flying start events were contested. The kilometer trials were held both ways, the time actually recorded to the driver's credit being the average. The time for 500 meters—.31 miles—from a flying start was taken during the second kilometer trials. Most of the contestants did better in the



GASTE IN THE SIX-CYLINDER ROSSEL AT BOLOGNE

second trial when they had the wind with them. In the case of the winner, Camille Jenatzy, the difference, however, was not striking in the standing start event. He covered the .62 mile the first time in :31⅘ seconds and the second time in :31. His average time is then :31⅖, or at the rate of 70 miles an hour. Incidentally this clips 2⅘ seconds from the world's record which Jenatzy established at this meeting last year.

In the flying start kilometer event Jenatzy covered the classic distance first in :23⅖, which was far from the record. In the return journey he went the same distance of .62 miles in :18⅕, his average time thus being :20⅘ seconds, which the officials said was a new world's record, and is at the rate of 112 miles an hour. Jenatzy's time for the 500 meters was :11⅘, or 1 second faster than the time of the Benz, which took second place.

Another hero of the day was Ferriol Jenatzy. He drove a Pipe chassis having a four-cylinder motor, 6.3 by 7.1. This motor, as in the case of the big Mercedes, is a duplicate of the Pipe airship motor. That the chassis is much more a racing car chassis than a touring car chassis nobody denied, even officials, still it was classed among the real touring cars. All the times made by Ferriol are new world's records for touring or stock cars. The time of the first eight cars in the general classification is as follows, in the kilometer standing start event:

1—C. Jenatzy, Mercedes, first trial, 31⅘; second trial, 31; average time, 31⅖.
2—Heim, Benz; 4.5 by 6.9, first trial, 35 seconds; second trial, 34⅘; average time, 34⅘.
3—Ferriol Jenatzy, Pipe, first trial, 38⅖; second trial, 39⅖; average time, 39.
4—Von Lengerke, Bergmann-Metallurgique, 4.1 by 6.5, first trial 40; second trial, 40⅘; average time, 40⅖.
5—Joerns, Opel, first trial, 43⅖; second trial, 40; average time, 41⅘.

Only five other contestants besides Camille Janatzy started in the flying start event. They finished as follows:

JOERNS IN OPEL AT THE BOULOGNE MEETING

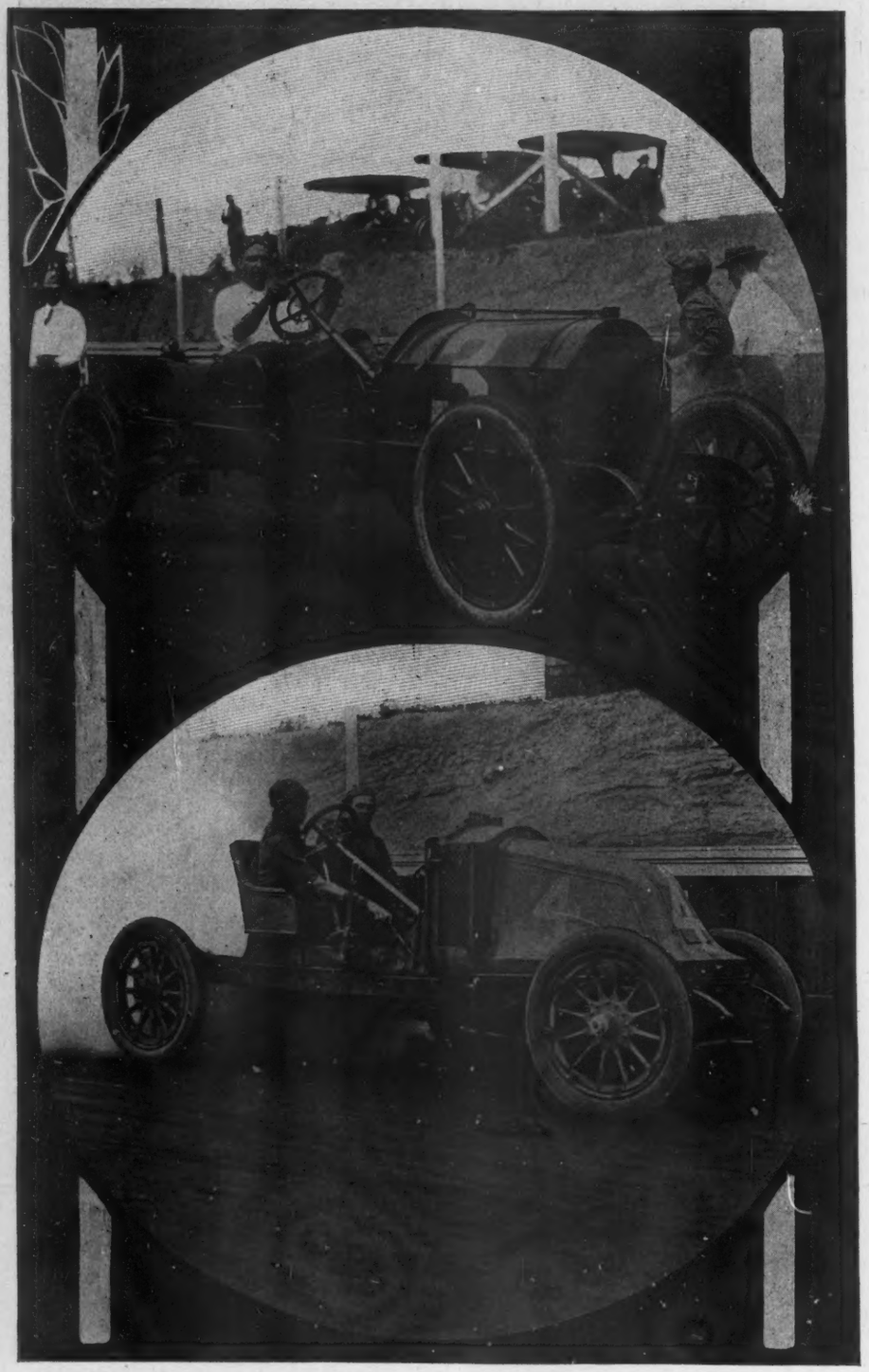
1—C. Jenatzy, Mercedes, first trial, 23⅖; second trial, 18⅕; average time, 20⅘.
2—Von Lengerke, Bergmann-Metallurgique, first trial, 28; second trial, 24⅖; average time, 26⅕.
3—Joerns, Opel, first trial, 29⅖; second trial, 25; average time, 27⅕.
4—Ferriol Jenatzy, Pipe, first trial, 29⅖; second trial, 27⅕; average time, 28⅕.
5—Boillot, Lion-Peugeot, first trial, 35; second trial, 30⅘; average time, 32⅘.
6—Sabbé, Benz, 3.5 by 5.5, first trial, 39⅖; second trial, 45; average time, 42⅕.

The last day of the racing gave another chance for C. Jenatzy to demonstrate the speed possibilities of his monster Mercedes. During the reliability tour, and as a part of the tour, there was a speed trial over a distance of 10 kilometers—6.2 miles—during each of the two circuits or laps the contestants had to cover. Upon Jenatzy's request two timekeepers were posted at the beginning of the last kilometer post during the second lap, as Jenatzy had expressed his intention of going that last kilometer in record-breaking time. So he did, for when the watches of the timekeepers were compared it was found that Jenatzy had covered the kilometer in :16⅘, or at the rate of 133.1 miles an hour. As a world's record this mark will not stand because only one trial was made while there must be made two trials, one each way.

With a single exception all the prizes offered at the annual meeting of Boulogne were won by foreign cars. Giuppone, with his little Lion-Peugeot saved the honor of France from being entirely left out of the honor. As at Ostend the Belbian driver Jenatzy made a clean sweep whenever he started. In one event, on the second day, he was begged by the officials not to start because the road was so wet and slippery that it was feared something might happen to the big car. Yesterday, the first day of the meeting, only one event was run off. It was a 7-kilometer—4.3 miles—speed trial for the Franchomme trophy. Joerns, in an Opel, won it, as he did last year. This time he covered the route in 3:29⅕, which was 7⅕ seconds slower than last year. The fastest time was made, however, by Jenatzy, who covered the course in the record-breaking time of 2:55⅕, averaging 89.4 miles an hour. Heim, in a Benz Prince Henry car, was second fastest, in 3:06⅕. The first event was a 3 kilometer—1.86 miles—standing start speed trial upon a level road or rather a level mud-and-water combination road bed. The best time was made by Ferriol Jenatzy, who covered the route in 1:22⅖ with his Pipe touring car. Last year Joerns, in an Opel, was the time winner in 1:12⅖. In the mile up-hill trials, from a standing start, Jenatzy gave an idea of what he could have done in the morning level road event. The Belgian climbed the mile in 1:16 with his Mercedes, which is 6⅖ seconds faster than the second fastest time which was made by his brother Ferriol, in the Pipe. The last event was the 500 meters—.31 miles—standing start hill climb. C. Jenatzy's time of 14⅕ seconds was at the rate of 78.5 miles per hour. Gaste, in the Rossel six, was a good second in :15⅖.

GUIPPONE IN THE LION PEUGEOT, LONE FRENCH WINNER AT BOULOGNE

DESPITE MANY HANDICAPS AMATEUR MEET



W. J. STODDARD IN FIAT, ONE OF STARS OF MEET
JOHN J. WOODSIDE, JR., IN RENAULT, WINNER OF PURSUIT RACE

ATLANTA, Ga., July 30—To postpone an amusement event usually is to kill it, but the local speedway meet held here today survived one postponement and was a financial and artistic success despite bad weather and notwithstanding the first hard luck that has ever visited the local track.

This morning it looked like the greatest strictly local race meet ever held in the country. Then the luck changed. Oldknow's National blew out a cylinder, the free-for-all Palmer-Singer smashed a camshaft and, to make matters as bad as they could be, T. B. Dial, mechanician of the Marion team, was killed about noon in a practice spin. Dial and his car rolled over and over down the steep side of the track at the beginning of the second turn. He did not live to explain how it happened. Apparently he had gone high up the bank coming out of the first turn. He must have turned too sharply down the steep bank. The car doubtless skidded and Dial threw out his clutch and set the brake. He was not going fast at the time and the track bore silent testimony to his fruitless efforts to claw the car back on the course. Careful examinations demonstrated that not a single part of the car was injured. All tires were right, the steering gear was intact, and it was the opinion that the car, once righted, could be run back to the garage under its own power.

Stoddard Star Driver

At today's meet it remained for W. J. Stoddard, the local amateur, to perform the most phenomenal feat of the day. It was in the second 10-mile free-for-all. The first one had been won by Mr. Stoddard, driving Asa Candler, Jr.'s, Fiat 60. His time was 8:03⅘, or a shade better than 74 miles an hour. This event was pretty easy sailing, as the Loewus' Palmer-Singer was out with a broken camshaft and the Simplex was having trouble with its intake pipe and was not going its best.

In the second 10-mile event just before reaching the last turn and while going at fully 70 miles an hour the steering arm of Stoddard's car broke, the left front wheel buckled and it was time for the miracle. Stoddard shut off his power and let the car go. It wobbled savagely, then straightened out and, steering with the right front wheel alone, Mr. Stoddard was able to slow down the car and to bring it back to the pits. With the Fiat out, the Simplex had all the best of it and won in the comparatively poor time of 8:16⅘. A Renault, with John J. Woodside, Jr., another amateur, driving, was second. These two 10-mile events were the only straight free-for-all races, but the meet opened with free-for-all time trials at 2 miles. This affair was easy for the Fiat 60. Driven by Stoddard, it made the 2 miles in 1:34⅕; the Simplex was second, and a Buick 17 was third.

There was an amateur free-for-all scheduled but it was left for the closing event, and when the time came the Simplex and Buick were out for the lack of drivers, and the Fiat, both Nationals and the Cadillac were temporarily incapacitated.

Small Cars Travel Fast

The best racing of the day was done in the 161-230 class. There were two races for this division, both at 8 miles. In the first the talent was inexpressibly shocked when K. T. McKinstry, driving a Firestone-Columbus, got away ahead of the E-M-F, driven by Harry Cohen, and stuck in front, despite grand going by Cohen's car. An Oakland, a Maxwell Q and a Ford also were in this event.

The table-turning came in the seventh event, under similar conditions, except that No. 9 was a double event, the 160 and under cars starting at the same time. In No. 7 the Firestone-Columbus again got away in front, but this time the E-M-F

ON ATLANTA SPEEDWAY IS A GREAT SUCCESS

was hitting on all four cylinders instead of only three, and it collared the Firestone at the first turn and held a trifling lead for mile after mile. When the two cars came into the stretch for the final drive to the wire they were not inches apart. Both cars were wide open, and it was a grave question as to which could get the most speed in the few remaining yards. Gradually the E-M-F pulled away and won, but it was by the slight margin of ⅕ second.

Easy for the Flanders

The 160 and under class was easy for the Flanders, with a Benz and a Hup trailing and a Fiat bringing up the rear. The 231-300 class was equally easy for the Pope-Hartford. The Maxwells and the Parry were working badly and Church, the driver of this car, made a clean sweep of it. In double event No. 10 he made a close race of it with the S. P. O., but it is to be suspected that he drew the finish unnecessarily fine.

The Australian pursuit race proved a neat event, even though there were only three starters—the Renault, S. P. O. and Buick. The Renault, driven by Woodside, had the better of it from the start and at the third lap had the Buick in distress. Going down the back stretch on the fourth lap, the Renault passed the Buick and the Flint machine was out. It took two more laps for the Renault to grab the S. P. O. On the sixth lap it was nip and tuck up the back stretch, head and head on the last turn, and coming down the home stretch the S. P. O. was nosed out. The race lasted 11 minutes and 11 seconds.

The program ended with the 10-mile handicap. Eight cars started in this and there was some brave scurrying. The Firestone-Columbus had a liberal time allowance in this and won by a wide margin, with the Maxwell Q a comfortable second. Summaries:

Summaries of the Meet

Event 1, 2-mile time trials, free-for-all—Fiat 60, Stoddard, won, time 1:34⅕; Simplex, Church, second, time, 1:37⅘; Buick, Smith, third, time, 1:55⅘; Cadillac, Lemon, fourth, time, 2:07⅗.

Event 2, 160 and under class, 6 miles—Flanders, Witt, won; Benz, Cohen, second; Hupmobile, Hall, third; Fiat 12, Taylor, fourth. Time, 6:38⅘.

Event 3, match race, 10 miles—National, Stoddard, won; Renault, Woodside, second. Buick withdrew. Time, 8:39.

Event 5, 231 to 300 class, 12 miles—Pope-Hartford, Church, won; Maxwell, Roach, second; Maxwell, La Hatte, third. Parry withdrew. Time, 11:53⅘.

Event 9, 160 and under division, 8 miles—Flanders, Witt, won; Hupmobile, Hall, second; Fiat, Taylor, third. Time, 9:20.

Event 9, 161 to 230 division, 8 miles—Firestone-Columbus, McKinstry, won; E-M-F, Cohen, second; Maxwell Q, Rambo, third; Oakland, Moss, fourth; Ford, Dunnell, fifth. Time, 8:35.

Event 8, free-for-all, 10 miles—Fiat 60, Stoddard, won; Simplex, Church, second; Renault, Woodside, third; S. P. O., Toole, fourth. Buick withdrew. Time, 8:03⅗.

Event 6, Australian pursuit race—Renault passed the Buick on the fourth lap and the S. P. O. on the sixth lap. Time, 11:11.

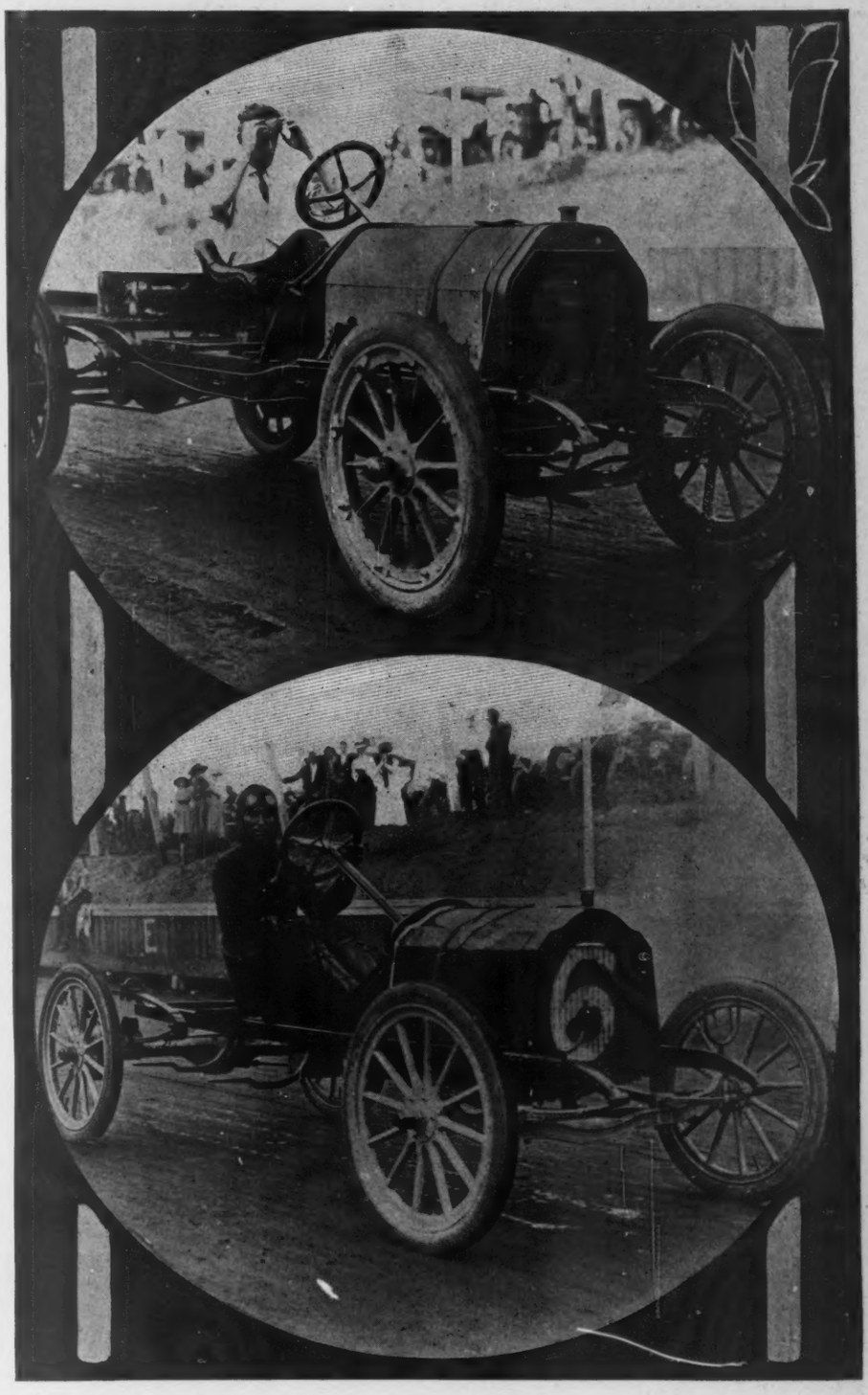
Event 7, 161 to 230 class, 8 miles—E-M-F, Cohen, won; Firestone-Columbus, McKinstry, second; Oakland, Moss, third; Maxwell Q, Church, won; Renault, Woodside, second; S. P. O., Toole, third. Fiat 60 withdrew. Time, 8:16⅗.

Event 10, 231 to 300 division, 12 miles—Pope-Hartford, Church, won; Parry, Phillips, second. Both Maxwells withdrew. Time, 12:33⅕.

Event 11, free-for-all, 10 miles—Simplex, Rambo, fourth; Ford, Dunnell, fifth. Time, 7:34⅘.

Event 10, 301 to 450 division, 12 miles—S. P. O., Toole, won. No other starters. Time, 12:38⅗.

Event 14, free-for-all handicap, 10 miles—Firestone-Columbus, McKinstry, won; Maxwell Q, Rambo, second; Renault, Woodside, third; Hupmobile, Hall, fourth; Ford, Dunnell, fifth; S. P. O., Toole, sixth; Buick, Smith, seventh; Pipe-Hartford, Church, eighth. Time, 11:00.



K. T. McKinstry Driving Firestone-Columbus

Witt in Flanders, Winner of Class Events

Atlanta Accepts Dates

Atlanta, Ga., Aug. 2—Special telegram—The Atlanta Automobile Association today decided to accept the November dates offered by the A. A. A. and to hold a 3-day race meeting. The question of holding a 24-hour race was considered, and representatives of the local track will soon go to New York to talk over the proposition.

Gossip of the Trade in Detroit

DETROIT, Mich., Aug. 1—Control of the Abbott Motor Car Co., of this city, passes to a syndicate of Pennsylvania capitalists as a result of a deal closed Thursday, following negotiations of several weeks' standing. The transaction, which was the most notable event of the week in local motor trade circles, means a new era for the Abbott company. Already the new owners have plans under way for increasing the output of the factory to 5,000 cars in 1911, which will call for an increase in the capital stock and some additional facilities. The concern put out about 1,000 cars during the year just closed. Shipments of the 1911 cars will begin in a few days.

About $500,000 was involved in the deal. This amount represents the holdings of Charles S. Abbott, F. R. Poss and a few smaller stockholders, who are known to have realized a good profit on their original investment. The company was organized in July, 1909, with a capital of $300,000. Messrs. Abbott and Poss held the controlling interest.

Personnel of Stockholders

Several of the new stockholders are largely interested in the Jacobson Machine Mfg. Co., of Warren, Pa., parts manufacturer, with which the Abbott company has had considerable dealing. The purchasers are: C. W. Jamieson, proprietor of the Warren Refinery Co. and president of the First National bank, of Warren; William Muir, president of the Pennsylvania Paraffine Works, Titusville, Pa., and the Blade Oil Works, Warren, Pa.; F. M. Knapp, president of the Jacobson Machine Mfg. Co. and the Warren Table Works and a director of the Warren & Jamestown Interurban railway, the Alleghany Foundry Co., the Warren Trust Co. and the Western Carbon Co.; George L. Craft and Charles Henry, of Craft & Henry, oil producers and refiners in Warren. Interested with these men are M. J. Hammers, secretary and general manager of the Jacobson Machine Mfg. Co., and H. M. Preston, the largest oil producer in Oklahoma district.

Mr. Hammers will remove to Detroit to assume the management of the Abbott plant. Associated with him will be A. T. O'Connor, John G. Utz and John Phillips, members of the present administrative staff, each of whom retains his interest in the company. Mr. Jamieson will be the new president in all probability. Charles S. Abbott, who promoted the Abbott Motor Car Co. and who now retires as its head, is a member of the law firm of Abbott & Abbott. Wade Millis, of Millis, Culver & Griffin, will be the legal adviser for the reorganized corporation. The Abbott company has a modern plant at Beaufait avenue and Waterloo street.

Local interest in trade conditions continues strong, but there is less slump talk than was heard a week ago. The press has done much to quiet the fears of the anxious ones by printing the results of investigations made by its representatives. Some of the papers have gone so far as to send staff men to Flint to inquire into conditions there. The correspondent of the Detroit News, in reporting his visit to the Buick factory, said:

"The Buick company yesterday received 262 orders for machines. I saw the orders. I saw also thirty-eight carloads of Buick machines loaded for Kansas City in response to an urgent telegram from the company's agent there, a message which I also saw, stating that the machines were sold. They go to farmers, mainly in Kansas, Nebraska and Missouri. The short of it is that prosperity such as the man of no special information probably has no conception of continues to beckon the motor car business, as exemplified in the mammoth plants at Flint."

The cargo in question represented a value of $231,000 and required fifty freight cars.

In accordance with its annual custom, the Buick company closed down its plant for 2 weeks Friday night for inventory. W. H. Little, factory manager, announces that the plant will resume operations after the inventory with a full force of men. From Saginaw comes the report that a rumor is afloat there, as a result presumably of the closing down of the Buick factory, that the Marquette works, the Saginaw branch of the General Motors Co., is to suspend operations indefinitely. The management has put a quietus on the story, however, by announcing that the plant will close for a week only late in August while the inventory is being taken.

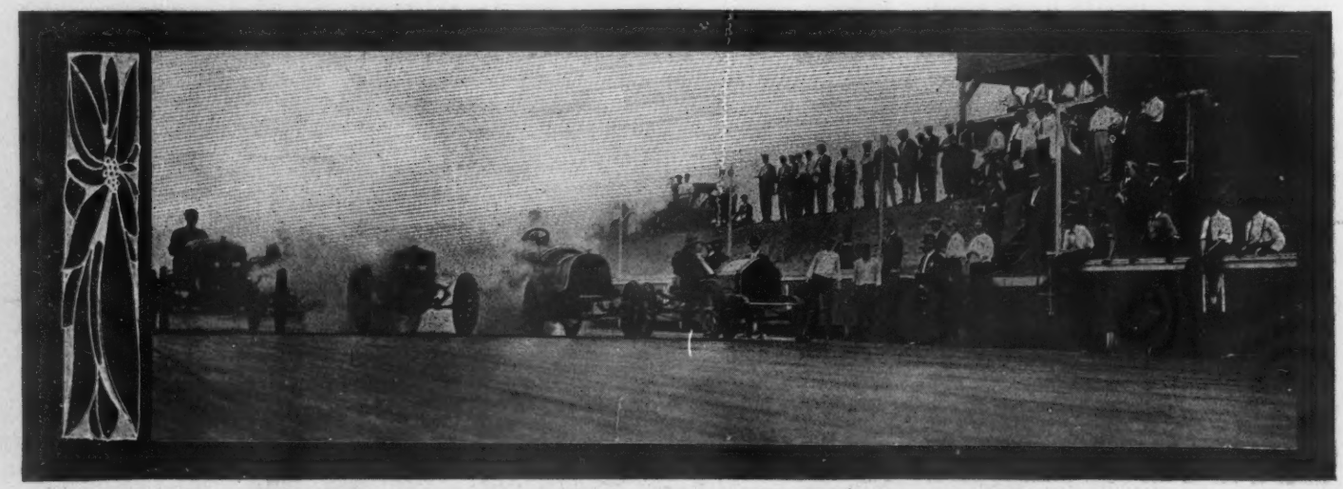
Cadillac Resumes Work

The Cadillac Motor Car Co., one of the strongest in the General Motors family, resumed operations last week after a 2 weeks' layoff, during which time its 3,500 employes enjoyed a vacation. The plant is now running full force and has made a good start on its 1911 output. The company took advantage of the occasion to make necessary repairs and alterations necessary for the comfort of employes.

As bearing on the present situation, the advertising pages of the newspapers, always an infallible index, afford some interesting information. The Chalmers Motor Co. wants immediately a number of first-class final assemblers for both day and night work. The E-M-F Co. is advertising for top builders and fitters and inspectors on machine parts for plant No. 3, although it has recently taken on a number of men laid off in other factories. The Grabowsky Power Wagon Co. needs inspectors; the Welch Motor Car Co., of Pontiac, is advertising for lathe men, milling machine men and general machine tool operators, while the Briggs Mfg. Co. has room for several experienced power machine operators.

The wonderful showing made by the Chalmers Motor Co. during the past year, as reflected in the action of the stockholders last week, when they declared a 30 per cent cash dividend still is the talk of the town and has done much to strengthen the public's confidence in the permanency of the motor car industry. Hugh Chalmers' optimistic view of the future, as published in Motor Age, has served as an additional bracer.

Architect Louis Kamper has prepared



ATLANTA SPEEDWAY MEET—START OF THE CARS IN THE 231-300 CLASS EVENT

plans for a factory building for the newly-organized Universal Motor Truck Co. and bids will be opened August 8. The company has purchased a site of 3 acres on the line of the Grand Trunk, in the northeastern section of the city. The building will be of reinforced concrete construction, 254 feet long and 61 feet wide, with a separate power plant. Work will be rushed in the hope of having the factory ready for occupancy November 1. About 500 men will be employed at the start, and the company hopes to have its first cars on the market early in February. It will manufacture commercial trucks of 1½ and 3 tons capacity, to be known as the Universal trucks. It is the intention, after the business has become well established, to make a 5-ton truck in addition to the smaller ones. This will make an addition to the plant necessary, but provision has been made for it in the plans. The men principally interested in the new venture are prominent Detroiters for the most part, including C. H. Habercorn, Judge Morse Rohnert, Louis Kamper, Curt Kling, a leading brewer; Edward Barker, Albert Fisher and others. E. Uiklein, of Milwaukee, is another of the incorporators.

The affairs of the Anhut Motor Car Co., one of the younger Detroit concerns, have been the subject of considerable gossip in local motor circles for several weeks. Ever since the reorganization a few weeks ago, when John N. Anhut stepped down from the presidency and was succeeded by William M. Walker, there has been much speculation as to the future of the company. Anhut remained as sales manager for the company, but friction has arisen between him and the directors over the disposition of some of the stock, and a committee has been appointed by the directors to investigate the matter. A legal question is involved. Mr. Anhut is now out of the city. It is expected that the matter will be satisfactorily adjusted as soon as he returns.

Another new manufacturing concern is likely to make its debut in the near future. As a preliminary step the Aetna Investment Co. was organized last spring to manufacture a trial car of a new torpedo type. This company has recently increased its capitalization from $5,000 to $20,000. A second corporation, known as the Huron Radiator Co., has been organized by the same people and now has a factory in operation. The officers of the Aetna Investment Co. are: President, Malcolm T. Faulkner; vice-president, Dr. L. C. Moore; secretary-treasurer, M. W. Allen. The directors are the officers, John A. Stuart and F. Stephen Kratzett.

Abbott Company Control Changes

The Detroit Auto Specialty Co. is building a large two-story addition to its plant on Greenwood avenue and has purchased 300 feet of land adjoining its property with a view to further increasing its facilities later on. The company makes gas engines, guards, fenders, tanks and other accessories.

Pending the completion of a garage at Woodward and Alexandrine avenues, ground for which has just been broken, the Elmore Motor Car Co. has established a temporary agency for Michigan and Canada at 295 Jefferson avenue, with M. A. Young in charge. The business here will be conducted under the style of the Elmore Automobile Co.

R. O. Willebrands left last week for the Pacific coast to establish agencies for the Carhartt Automobile Corporation and the Herreschoff Motor Car Co. On his return he will take charge of the sale of these cars in the state of Michigan.

Plans are out for a new garage for the Detroit Motor Sales Co., to be erected at the corner of Woodward and Canfield avenues. It will be one of the most ornamental structures of its kind in the city if the plans are carried out.

New Club Prospering

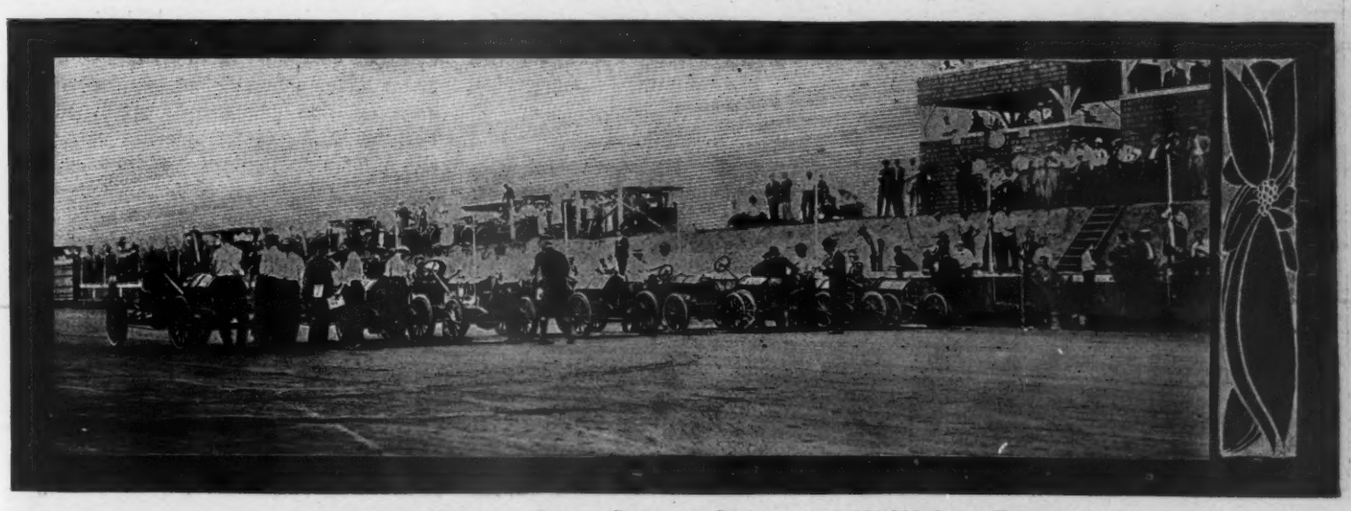
Members of the newly-incorporated Wolverine Automobile Club motored to Silver Lake, near Howell, Mich., Saturday afternoon for the club's initial outing, remaining over Sunday. Although the club is only a few days old, the membership already has reached seventy-eight and is steadily increasing. It has adopted as its device a steering wheel in red, with a yellow sector, and the letters "W. A. C." in blue on a white background.

The secretary of state at Lansing reports that up to date 16,167 motor car licenses and 867 motor cycle licenses have been issued by his department, representing total fees of $51,000. He has just placed an order for 20,000 more plates, to be delivered before January 1, 1911. It has come to the secretary's notice that many owners have been purchasing plates from sources other than the state department, and he is making every effort to learn the identity of the persons who are putting them out. The only difference between the fake plates and the genuine is that the former do not bear the seal of the state.

Some 2 dozen Cadillac sales agents from all parts of the country organized an association known as the Old Guard in Detroit Saturday night. Each member has been in the service of the company at least 5 years. The association will meet three times a year, in January at New York, in February at Chicago, when the shows are on, and in Detroit at the time the new model is ready for the market. G. E. Blakeslee, of Jersey City, the oldest sales agent in the company's employ, was elected president; I. M. Uppercue, of New York and Newark, was chosen secretary and treasurer. There are no other officers. E. R. Benson, general sales manager, and his assistant, E. C. Howard, were elected honorary members of the association, along with H. M. Leland, who is now in Europe.

Will Sell the Lion

The Lion Motor Sales Co. has been organized with a capital of $10,000 to handle the Lion car, made in Adrian, Mich. The officers are: Fred Postal, president and treasurer; Robert L. Fee, vice-president and manager, and Harry Postal, secretary. The same men constitute the Michigan Motor Sales Co., 650 Woodward avenue, with Lloyd Brown in charge of the sales agency.



ATLANTA SPEEDWAY RACES—START OF CARS IN THE 161-230 CLASS EVENT

CHICAGO ATHLETIC ASSOCIATION MOTORISTS

START FROM THE CHICAGO AUTOMOBILE CLUB

THE TWO CAPTAINS—VAN SICKLEN, C. A. C., AND KNISELY, C. A. A.

CARS AT THE EDGEWATER CLUB GARAGE, ST. JOE

CHICAGO, July 30—The third annual interclub reliability team match between the Chicago Automobile Club and the Chicago Athletic Association, a thoroughly amateur affair, was run Thursday and Friday of this week, going to St. Joe, Mich., and return, a distance of 132 miles each way—a total of 264. As a result of the battle between the club men, the Chicago Athletic Association regained the trophy which it won the first year and which was taken the second time by the Chicago Automobile Club. The C. A. A. team won because it had the fewest points against the thirteen cars which ran—55.3—while the C. A. C. had 77 points, amassed by its eleven cars. Because of the uneven sides the larger team was penalized only 11-13 per point. The contest was run under grade 3 with penalizations only for road work and time.

In previous years the clubmen have been satisfied with a 1-day trip, but this time they became more ambitious and doubled it, choosing a tri-state route, running from Chicago to St. Joe, touching Illinois, Indiana and Michigan, and making the stop at the Edgewater Club at St. Joe. The route showed all kinds of road conditions—some fine, some good and some indifferent—while the scenery, particularly though Michigan, was decidedly picturesque. As a result of the enthusiasm the C. A. A. turned out thirteen cars, losing three by scratches at the eleventh hour, while the holder of the trophy had eleven, losing five by withdrawals. These twenty-four cars got away promptly Thursday morning from the Chicago Automobile Club and the first day's itinerary included checking stations at Valparaiso, 60.4 miles; La Porte, 84.2; Buchanan, Mich., 110 and St. Joe, 131.8. The dinner stop was at La Porte. There was not much incident connected with the first day's run. Three of the C. A. A. cars were penalized and five of the C. A. C. But the C. A. C. drew the heaviest penalization, there being 50 points marked against it as against 9.81 for the C. A. A.

Knisely of the C. A. A. had a motor stop and took on water; R. B. Wilson, C. A. A., had a motor stop and had to take on gasoline outside of control, while H. H. Latham, C. A. A., had a motor stop. On the other side Captain Van Sicklen was

STANDING OF THE TEAMS

CHICAGO ATHLETIC ASSOCIATION

No.	Car and driver	1st day pen.	2d day pen.	Total pen.
1	Palmer-Singer, Knisely	5.06	0	5.06
3	Locomobile, Hamm	0	0	0
5	Stoddard-Dayton, Coon	0	0	0
7	Diamond T, Grower	0	0	0
9	Stoddard-D., Ireland	0	0	0
11	Rambler, Chamberlain	0	44	44
13	Franklin, Wilson	3.1	0	3.1
15	Rambler, Latham	1.65	0	1.65
17	Chalmers, Briggs	0	0	0
23	Palmer-Singer, Thorne	0	1.5	1.5
25	Rambler, Wentworth	0	0	0
27	Locomobile, Jackson	0	0	0
31	Peerless, Jacques	0	0	0
	Total			55.3

REGAIN THE INTERCLUB RELIABILITY TROPHY

penalized for a chain adjustment; W. C. Atwell took on water and had a motor stop; E. T. Franklin had spring trouble; R. O. Evans had to work on a fan belt, J. T. Brown had a motor stop and L. E. Myers was late and also had a motor stop.

The contestants reached the Edgewater Club at 4:30 in the afternoon, which gave them plenty of time for a dip in the lake before supper. Such a crowd—there were more than 125 in the party—naturally taxed the accommodations of the club to the limit, but a big dormitory was improvised under the front porch and facing the lake, where most of the contestants, passengers and observers slept. There was a lack of formality about this that appealed to the crowd and everyone bunked on the cots without murmur.

Every car was ready for the start the second day and the trip home was started with a cloudy sky that promised showers. This, however, made the riding more enjoyable and it was not until the afternoon that the showers came. Those up in front escaped with only a few drops, but those at the tail-end of the procession came in for a drenching. Still, this did not cause any discomfort, although it cost W. C. Thorne his perfect score. He neglected his pressure gauge while putting up the top and in consequence his motor died. Spring trouble that came to W. H. Chamberlain of the C. A. A., threatened to beat the Cherry Circle and it made the contest much closer.

The second day's running brought penalizations only to six cars—two on the C. A. A. side and four on the C. A. C. Chamberlain and Thorne were the Cherry Circle unfortunates, while on the losing side N. H. Van Sicklen drew 5 points for work on the jackshaft; Charles Bosch had a motor stop; J. T. Brown an engine stop and L. E. Myers drew 20 points because of a clogged gasoline line. Chamberlain of the C. A. A. was the only one penalized the second day for being late.

While most of the towns along the route displayed interest in the match, it remained for Buchanan to turn itself inside out. Mayor Hamlin, a live wire, had banners across the street and halted the procession long enough to give each participant liquid and solid refreshments.

STANDING OF THE TEAMS

CHICAGO AUTOMOBILE CLUB

No.	Car and driver	1st day pen.	2d day pen.	Total pen.
2	Apperson, Van Sicklen.	5	5	10
4	Stearns, Bosch.....	0	1	1
6	Stoddard-Dayton, Atwell	7	0	7
8	Stevens-D., Shaffer.....	0	0	0
10	Moon, Franklin.....	17	0	17
12	App'son, Van Sicklen, Jr.	0	0	0
16	Apperson, Evans.....	2	0	2
18	Pierce-Arrow, McKenna.	0	0	0
20	Ford, Mudd.....	0	0	0
22	Velie, Brown.....	1	1	2
24	Apperson, Myers.....	18	20	38
	Total			77

BUCHANAN, MICH., GIVES CONTESTANTS A HEARTY GREETING

EDGEWATER CLUB AT ST. JOE, THE NIGHT CONTROL

MEMBERS OF THE VICTORIOUS CHICAGO ATHLETIC ASSOCIATION TEAM

Eighteen Cars Perfect at Cleveland

CLEVELAND, O., July 30—Eighteen cars out of a total of thirty which made the 500-mile 3-day reliability tour under the auspices of the Cleveland News and the Cleveland Automobile Club finished the run Wednesday night with perfect scores. The affair was run under grade 3 rules, with penalties only for work on road and time. A drenching rain caught the party when it was a few miles out of the city but had no effect on its enthusiasm. The motorists, travel-stained and weary, formed into line at the outskirts of the city, and with an escorting party of fifty and a band paraded to the Hollenden hotel. The perfect scores were as follows:

1, Oldsmobile, J. C. Winters; 3, Studebaker 40, Ira Fouche; 4, Palmer-Singer, Hugh Miller; 6, E-M-F, Frank Grace; 7, Henry 35, J. B. Sperry; 8, Regal,, J. C. Hipp; 10, Gabriel, Peerless, A. L. Soper; 11, Firestone-Columbus, Harry McIntosh; 17, Cutting 40, J. C. Koepke; 18, Maxwell, Frank Santry; 20, Columbia, C. G., Bleasdale; 22, Gaeth, Otto Lindner; 25, Owen, F. Monroe; 27, Garford truck, Ralph Kinney; 33, Oakland, Fred Krum; 35, Overland, H. C. Knudsen; 36, Chalmers 30, John Stambaugh II.; 39, Hudson, William McCalla. The tabulated results:

No.	Car	Driver	Score
1	Oldsmobile	J. C. Winters	1,000
3	Studebaker 40	Ira Fouche	1,000
4	Palmer-Singer	H. Miller	1,000
6	E-M-F	F. Grace	1,000
7	Henry	J. B. Sperry	1,000
8	Regal	J. C. Hipp	1,000
10	Peerless-Gabriel	A. L. Soper	1,000
11	Firestone-Columbus	H. McIntosh	1,000
17	Cutting	J. C. Koepke	1,000
18	Maxwell	F. Santry	1,000
20	Columbia	C. G. Bleasdale	1,000
22	Gaeth	O. Lindner	1,000
25	Owen	F. Munroe	1,000
27	Garford truck	R. Kinney	1,000
33	Oakland 30	Fred Krum	1,000
35	Overland	H. C. Knudsen	1,000
36	Chalmers	J. Stambaugh	1,000
39	Hudson	W. McCalla	1,000
34	Stoddard-Dayton	H. S. Moore	997
12	Atlas	H. Kortz	992
16	Hupmobile	J. Rauch	990
31	Hines	F. J. Moore	983
15	Pierce-Racine	C. N. White	978
24	Krit	H. Gabriel	976
32	Norwalk	H. B. Olds	967
30	Packard	F. J. Lentz	939
19	Brush	D. E. McCoy	930
28	De Tamble	W. Orndorfer	841
9	Hines	O. Alexander	805

PENALTIES IMPOSED

9, Hines—For work repairing bushing.
12, Atlas—For work on spark plug.
15, Pierce-Racine—For work on carbureter and taking water between controls.
16, Hupmobile—For work on carbureter and taking on water between controls.
19, Brush—For work repairing carbureter and for replacing wheel.
24, Krit—For work repairing carbureter and magneto and taking on water between controls.
26, National—Withdrawn at Toledo because of illness of Mr. Foote.
28, De Tamble—For work repairing carbureter and spark and throttle control; replacing of crank and taking water twice.
30, Packard—For work repairing water line.
31, Hines—For work repairing gasoline line and taking gasoline between controls.
34, Stoddard-Dayton—For taking gasoline between controls.

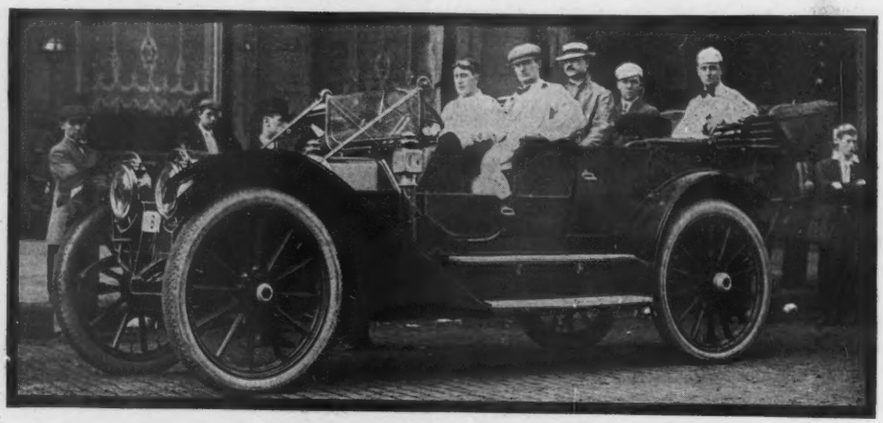
Besides the prizes awarded by the News a trophy for the most nearly perfect score in the 1A class, for cars selling under $800, was awarded to the Hupmobile, driven by John Rauch. The little car made a splendid showing and but for a slight carbureter trouble probably would have turned in a perfect score. H. C. Knudsen, who maintained a perfect score with his Overland, and John Stambaugh, Chalmers 30, also received prizes. It is only fair to state that the penalties incurred by the other contestants were, with only one or two exceptions, due to minor difficulties, as is best evidenced by the fact that all the cars were able to make the journey and check in at the final control under their own power.

The first day's run ended in Columbus, O. The country was rich in natural beauty but parched for want of rain, making the dust heavy.

The start on the second day was made at 6:30 in the morning. The route was from Columbus, via Lima, Findlay, Bowling Green to Toledo. The roads were good and there were few hills. Tire trouble was the severest affliction of the day's run. A number of cars were delayed on account of such trouble for much of which the excessive heat could be blamed. Residents along the route tossed apples and other fruits to the motorists as they hastened by.

A heavy thunderstorm at Toledo during the night cooled the air, laid the dust and

Cleveland Reliability Perfect-Score Cars



No. 1 Oldsmobile Driven by J. C. Winters

Columbia Car Driven by C. G. Bleasdale

Maxwell, Frank Santry Driving, Perfect-Score Car

made the last day's run the most comfortable of all. As the route led nearer home the size of the welcoming parties in the various towns became larger and larger. At Norwalk, where luncheon was had, the mayor and other city officials were on hand to greet the party. The street in front of the hotel was blocked for nearly an hour while the crowd eagerly examined the machines. Between Norwalk and Elyria the cars were given their final test for sturdiness. The rain of the night before had filled the holes and ruts with mud and water which made it impossible to guage the road and made trouble for the tourists.

Good Track Racing at Columbus

COLUMBUS, Ohio, July 31—Despite the street car strike which materially lessened the transportation service and which caused an entire suspension of service for the first day, large crowds attended the race meet at the Columbus driving park July 29 to 30. The most bitterly contested event on the first day was a 5-mile handicap for cars of 600 cubic inches piston displacement. There were nine starters, including Oldfield, with a handicap of 53 seconds. Rickenbacher, in a Firestone, won in 5:42⅗.

Oldfield sent his Benz against time, making the mile in 53 seconds, which is a new state track record. Ben Kerscher drove his Darracq three times around the mile track in 2:35⅘. Summaries:

Five miles, for cars of 230 cubic inches piston displacement, stripped stock chassis—Richenbacher, Firestone, won; Emmons, Herreshoff, second. Time, 5:34⅘.

Five miles, for cars from 231 to 300 cubic inches piston displacement—Hughes, Parry, won; Elliott, Firestone, second. Time, 5:31⅘.

Five miles, Columbus championship—Herbert Campbell, Parry, won. Time, 5:34⅘. Baldwin in Interstate also started.

Five miles, stock cars, 301 to 450 cubic inches piston displacement—Fritz, Buick, won; Hughes, Parry, second. Time, 5:07⅘.

Five miles, free-for-all handicap—Rickenbacher, Firestone, won; Oldfield, Knox, second. Time, 5:01⅘.

Twenty-five miles, free-for-all — Oldfield, Knox, won. Time, 26:53⅘. Other entrants were Frayer in a Firestone, Elliott in a Firestone and Donnelly in a Cino.

The feature of the second day's racing was the 100-mile free-for-all in which six cars were entered. The race was won by Lee Frayer in a Firestone-Columbus, in 1 hour 49 minutes 52 seconds. Oldfield, in a Knox, was second, having completed the ninety-fifth mile when Frayer finished. Elliott, in a Firestone-Columbus, was third and Hughes, in a Parry, fourth. The time was: 25 miles, 26:15; 50 miles, 54:15; 75 miles, 1:23:15; 100 miles, 1:49:52. Summaries:

Five miles, stock chassis, 301 to 450 cubic inches piston displacement—Fritz, Buick, won; Hughes, Parry, second. Time, 5:14⅘.

Five miles, cars from 231 to 300 cubic inches piston displacement — Hughes, Parry, won. Time, 5:26⅘. No other cars finished.

Five miles, handicap, cars not exceeding 600 cubic inches piston displacement—Rickenbacher, Firestone-Columbus, won; Hughes, Parry, second; Frayer, Firestone-Columbus, third; Elliott, Firestone-Columbus, fourth; Oldfield, Knox, fifth. Time, 5:16⅘.

Five miles, cars 230 cubic inches piston displacement and under—Frayer, Firestone-Columbus, won; Emmons, Herreshoff, second. Time, 5:31.

One hundred miles, free-for-all—Frayer, Firestone-Columbus, won; Oldfield, Knox, second; Elliott, Firestone-Columbus, third. Time, 1:49:56.

Barney Oldfield tried to break the mile circular track record with his Benz, but failed, making a mark of 50⅗. This mark breaks the track record. Ben Kerscher tried to break the record for 3 miles on a mile circular track, failing in his attempt. His time was 2:35⅗.

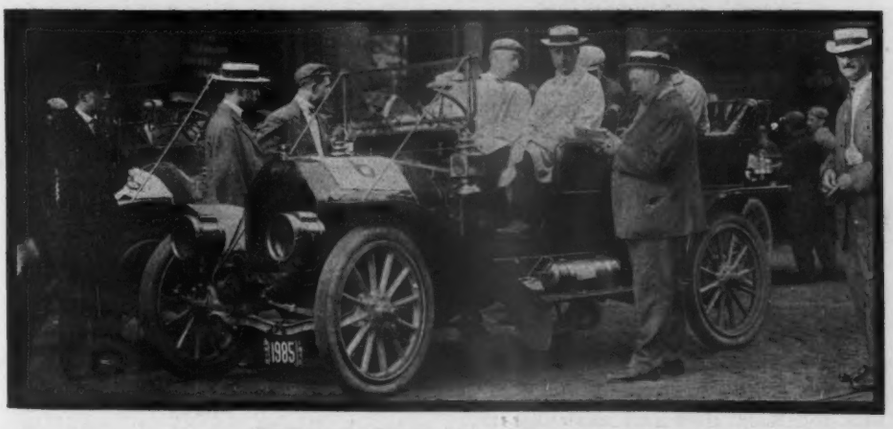
OLDFIELD AT CHILLICOTHE

Chillicothe, Ohio, July 28—About 1000 people gathered at the Driving Park last Monday to witness the races given under the auspices of the Order of Owls. Ben Kerscher gave an exhibition 2-mile drive in his Darracq, making it in 2:27½, which equaled the record on the local track. Oldfield, driving his Benz, went against the mile record on a ½ mile track, making it in 1:10. Oldfield and Kerscher ran a 2-mile handicap, with Oldfield in a Knox, having 18½ seconds start on Kercher in his Darracq. Kerscher failed to catch Oldfield, although he traveled the course in 2:43 and Oldfield in 3 minutes flat. The meet was well attended and the time made by Oldfield and Kerscher was considered remarkable because of the size of the track.

Cleveland Reliability Perfect-Score Cars

No. 4 Palmer-Singer with H. Miller at the Wheel

Ralph Owen's Big-Wheeled Owen Car



Studebaker Which Made a Perfect Score

Standardization Is the Theme

(Continued from page 7.)

want the maximum power, and others desire a combination of these—that is, for a fair amount of power and relatively quiet. The form or actual shape of gas passages, whether ring-like in poppet valves, rectangular in the Knight or triangular in rotary valves, has a vast amount of influence on the charge taken into the cylinders. The annular opening of the poppet valve does not give the same amount of gas flow as the same area of opening would in a rotary valve; this is in accordance with the laws governing the flow of gases through passages. The Knight type of valve can be depended upon to give the maximum power of a motor, but if we get the maximum of power will we not have to revise our specifications on the sizes of motor parts and revise our lubricating system to take care of conditions when this maximum of power is obtained? At present our crankshafts and bearings will be too weak for such power and our lubricating systems inadequate. We must approach the subject of the best motor from the practical viewpoint—that is, what is the best practical motor that will give us the maximum of power for a motor car? All of us were amazed at the Sizaire single-cylinder car performance, averaging 66 miles per hour for 100 miles, the motor having a bore of 3.9 inches and a 10-inch stroke. This was the beginning of the move for motors in America with a long stroke. The Sizaire motor developed 35 horsepower and had a piston speed of 3,500 feet per minute. Ordinary oils were useless in such a motor and it was necessary to use castor oils. I think there is a commercial limit in motor design which must be kept in mind, and if we go to some proposed designs of valves we will have to entirely adjust our data on motors for this work."

Speaking with reference to slide valves, as used in the Knight motor, Designer David Ferguson said: "The Knight engine has certain advantages. It is delivering the goods, and the Daimler company can sell more than it can manufacture. The motor is giving excellent results and is more silent than you can get with poppet valves. The public wants actual silence in motors, and if they demand such conditions we must redesign the poppet valves or use other types. The Knight engine has made wonderful strides and has created the demand for a quiet motor. I do not know tnat this motor gives extra power at low speeds, but it gives much more at high speeds.

"The perfect waterjacketing of the Knight motor as compared with the poppet-valve type is excellent. One big advantage in conjunction with the sliding sleeve motor is the lack of variation. In the poppet valve type the strength of the exhaust valve spring decreases 35 per cent after 6 months' use, and after 1 year the valves are found sticking up as well as carbonizing. This does not happen in motors with sleeve or rotary valve."

Speaking relative to the Knight motor, H. J. Edwards said: "I think the question of noise in a motor depends entirely on the proportion of the cams. Poppet valve motors can be made as quiet as a slide-valve type. The question of upkeep in the poppet valve motor is important. The valves have to be ground and kept up, whereas with sliding sleeves or rotary valve types they must be right at the start and stay right or they will not work. In rotary valve engines attention must be paid to balancing them, otherwise much pressure will be generated at the time of the explosion within the cylinder, and this will make it hard on the driving means."

In answer to the question as to whether heat was retained by the inner sleeve of the Knight motor, tests of 1 hour's duration were cited in which the motor, with 4⅞-inch bore and 5-inch stroke, gave 68 horsepower continuously with the water at a maximum temperature at 150 degrees Fahrenheit and with no signs of pre-ignition when the motor stopped. The general concensus of the engineers was that the public wants three things in motors, namely, power, long life and quietness. It was argued that if the weight of valves is reduced, as well as valve-lifters, the noise is proportionately reduced, but the danger of cutting down the life of these parts is encountered. Large valves give extra power, but they also cause trouble because of warping. By ample waterjacketing the warping may be eliminated. There are many ways by which the present poppet-valve motor may be improved. Howard Coffin thought that the most important consideration was to get a fool-proof motor, one in wihch there is a minimum of parts to which a wrench may be attached, which means a motor which will remain as delivered the longest time. This motor may not be the quietest or give the most power, but it would give the most satisfaction.

BUICKS DISQUALIFIED

New York, July 30—The contest board of the American Automobile Association has disqualified the Buicks that ran in the stock car events at Indianapolis, which were known as Marquette-Buicks and Buick Specials and has declared their speedway performances at the July meeting null and void. The reasons for the disqualification are given by the contest board as follows:

1—That in the races held at the Indianapolis motor speedway, July 1, 2 and 4, 1910, the Buick Motor Co., and, or, the Marquette Motor Co., violated the letter as well as the spirit of rules 4, 5 and 75 of the 1910 contest rules in that said Buick Motor Co. and, or, said Marquette Motor Co. entered and ran as Buick stock cars models A and 16B, which cars were not Buick stock cars under the 1910 contest rules of the A. A. A.

2—That these cars were entered in such a form as to give them the stamp of the Buick stock output, when, as a matter of fact, they were not Buick stock output under the 1910 contest rules of the A. A. A.

3—That the alleged stock chassis 16A and 16B entered in such races at Indianapolis, July 1, 2 and 4, 1910, were not, as a matter of fact, on sale or offered for sale in a bona fide manner at the regular selling agencies of the Buick Motor Co. and, or, the Marquette Motor Co., as required under the 1910 contest rules of the A. A. A.

4—That the privilege of competing in the said races at Indianapolis, July 1, 2 and 4, 1910, under the title Marquette-Buicks was granted upon the express condition that in event of successful performance there was to be no advertisement of such performance under any other name than Marquette-Buick; that this condition was violated by the publication in the New York Herald of July 10, 1910, of the performance of Buick cars at Indianapolis, July 1, 2 and 4, no mention whatever being made of Marquette-Buicks, and, therefore, the condition having been broken the privilege was nullified and made void from the beginning.

By this decision the Remy trophy goes to Dawson and the Marmon, the G & J to Pearce and the Falcar, while Harroun in the Marmon goes to second place in the Cobe cup race, with Grant in the Alco third. In four short distance events the Buick drivers are deposed, those to profit most by this being Dawson, and Aitken.

LOWELL RACES ABANDONED

Lowell, Mass., July 28—The Lowell road races scheduled for September 15 and 17 next died here today when a number of the men interested in them held a meeting and considered the matter. An intimation that there would be no races this year was conveyed in a letter to Frank E. Wing, Boston agent for the Marmon, who wrote for entry blanks for Dawson and Harroun. That was on Tuesday. But the matter was held in abeyance until President John O. Heinze returned from a trip west. Then the matter was discussed. The threat that twenty-two residents on Varnum avenue opposed to the race and would seek an injunction had some weight, for Mr. Heinze believes that in all such big projects there should be no kickers. Then there was a feeling of apathy when the makers were approached relative to entries. Some months ago when it was stated that there would be no races some of these men, it was said, talked about what a serious thing it would be to drop Lowell from the circuit, and how easy it would be to get cars. Now, however, the prospects of entries are not very bright, it appears, and this also had its effect. With such fine races in the past it was felt that it would not do to put on less attractive ones this fall. So everything considered it was decided to call the events off. The Lowell residents who favor the races were very much surprised when they heard it.

CROXTON-KEETON AFFAIRS

Toledo, O., Aug. 1—At the request of a large majority of the creditors of the Croxton-Keeton Motor Co., a committee of five, consisting of Isaac Kinsey H. J. Mallery, Christian Girl, L. A. Loighot, and W. F. Ricks, was appointed July 20 to reorganize, refinance or liquidate the

Croxton-Keeton company. The committee after going over the plant reports that debts amount to $300,000; that the assets about equal this amount. The committee reports that if it is possible to obtain enough money to manufacture the cars for which parts are on hand, the business could be operated with a possible result of 50 to 60 per cent on the dollar, otherwise liquidation would reduce the dividend more than 10 per cent. There are upward of 300 creditors. The Citizens Savings and Trust Co., Cleveland, O., has been made depository during the control of the committee.

FRANKLIN WINS DISPATCH CUP

Minneapolis, Minn., July 30—Scores of the entrant cars in the second annual tour of the Minnesota State Automobile Association were announced late today by Dr. C. E. Dutton, the referee. The award of the high score goes to W. H. Kent's Franklin, which carries with it the Dispatch trophy for the St. Paul Automobile Club. The Werner prize also is taken by the Kent Franklin. The Gregg trophy for small cars will go either to the Ford or the Reo, according to the maximum price set for the division line of small cars. The two winning drivers get gold medals, and Renville county is awarded the Louis W. Hill good roads prize. The Glide, which was heavily penalized, was charged in the road score for time done on the road in repairs and adjustments done on the road. The technical committee finished its work last night after a strenuous session covering 3 days. Final results:

No.	Car and driver	Road Penalty	Final Exam.	Score
43	Franklin, A. H. Clark.	0	3	997
4	Reo, G. A. Lewis.....	6	5	989
12	Ford, A. A. Hanson...	1	20	979
7	Cadillac, Stensvad.....	21½	21	957½
5	Halladay, Palmund....	27	16	957
1	Pierce-Arrow, Phillips.	0	48	952
11	Cole, W. A. Alden.....	24	29	947
17	Chalmers, J. S. Gilbert.	0	57	943
14	Hudson, O. E. Martin..	0	64	936
15	Halladay, C. W. Shanne	4	97	899
18	Cartercar, R. H. Ivey.	46	57	897
3	Hupmobile, Stinson...	45	59	896
10	Cole, F. J. Seifert....	32	84	884
8	Auburn, W. J. Ranger.	5	144	851
9	Regal, A. La Roche...	0	296	704
5	Staver, T. Duis.....549		1	450
16	Glide, B. E. Sylvester..577		155	268

NOT CONNECTED WITH MOTOR AGE

In a pamphlet now being circulated by the Fal Motor Co., Chicago, Ill., manufacturer of the Fal motor car, the statement is made that "N. H. Van Sicklen, Sr., publisher of Motor Age, has been made president of the Fal company." Motor Age wishes to state that Mr. Van Sicklen, Sr., has no interest whatever in Motor Age; that he is not in any way connected with this publication, nor has he been since the sale of the property 2½ years ago to the Class Journal Co., the present owner of Motor Age. It is one of the foundation principles of the Class Journal Co. that not one of its members shall in any way be interested in the manufacture or sale of any apparatus in the field of the papers the company publishes. This policy has been rigidly adhered to since the inception of the Class Journal Co. and will be continued.

Boom-Time in the Export Business

WASHINGTON, D. C., July 31—Going up aptly describes the condition of the export trade in motor cars and parts. The latest returns of the bureau of statistics show that during June 984 cars, valued at $1,638,321, and parts valued at $256,484 were shipped abroad, as against 577 cars, valued at $1,046,856, and parts valued at $69,008, exported during the same month of last year.

During the fiscal year ended June 30, 1910, the shipments of cars and parts reached the highest point in the history of the industry, being double what they were last year. The number of cars exported was 6,926, their value being $9,548,700, while the value of the parts exported was $1,641,520, making a grand total of $11,190,220 as the value of our export trade in cars and parts during the fiscal year. Last year the number of cars exported was 3,184, valued at $5,387,021. Adding $605,179 as the value of the parts exported gives a total of $5,992,200 for the year's export trade. These figures are highly illuminating and show the enormous strides being made by American built cars in the countries of the world.

The following tables give the shipments of cars and parts by countries for June and the fiscal year ended in June, together with comparative figures for the corresponding periods of last year:

Exported to—	June, 1909	June, 1910
United Kingdom.....	$ 436,276	$ 617,371
France	178,488	241,500
Germany	46,454	48,006
Italy	26,666	18,163
Other Europe	58,336	129,525
British North America.	287,901	661,625
Mexico	18,074	39,106
West Indies and Bermuda	6,672	7,335
South America	8,382	46,209
British East Indies....	452	2,706
British Australasia	27,616	30,638
Other Asia and Oceania.	11,852	35,619
Africa	5,016	13,531
Other countries	3,979	3,471

Exported to—	Fiscal year 1909	Fiscal year 1910
United Kingdom	$1,812,091	$2,656,214
France	661,525	825,904
Germany	141,056	275,241
Italy	241,660	337,614
Other Europe	329,170	550,414
British North America..	1,692,980	4,383,487
Mexico	387,446	540,325
West Indies and Bermuda	255,158	413,888
South America	143,730	342,767
British East Indies....	23,853	53,931
British Australasia	138,871	350,193
Other Asia and Oceania.	101,048	294,592
Africa	41,428	114,514
Other countries	22,184	51,136

The import trade in cars and parts shows a slight falling off during the periods under consideration. Last June the number of machines arriving at the several ports was 114, valued at $233,229, together with parts valued at $75,569, while in June a year ago the number of cars was 131, valued at $246,291, with parts valued at $72,276. During the 12 months' period the number of cars imported dropped from 1,624, valued at $2,905,391 in 1909, to 1,473 cars, valued at $2,851,446 in 1910. However, the value of the imported parts increased from $773,743 to $985,638 during these periods, Uncle Sam declares in his report.

The imports of cars from the United Kingdom during June, 1909, was 9, valued at $16,481, while in June last the number was 7, valued at $14,213; from France the number dropped from 69, valued at $130,694, to 62, valued at $122,568; from Germany the number increased from 6, valued at $19,461, to 17, valued at $40,867; from Italy the number decreased from 44, valued at $74,283, to 12, valued at $22,806, while from all other countries the number increased from 3, valued at $5,372, to 16, valued at $32,775.

During the fiscal year just closed the number of cars imported from the United Kingdom was 101, valued at $236,015, as against 100, valued at $226,050 imported last year. The number received from France this year was 782, valued at $1,467,646, as against 1,099, valued at $1,838,653 last year. Germany's shipments to this country were valued at $368,219 for 150 cars, while last year the number was 64 and the value $193,580. Italy's exports to this country increased from 328 cars, valued at $561,620 in 1909, to 352 cars, valued at $587,052 in 1910. From all other countries the imports of cars increased from 33, valued at $85,488, to 88, valued at $192,514. This report is considered as most flattering by the motor car manufacturers.

CLIMB AT SALT LAKE

Salt Lake City, Utah, Aug. 1—The Evening Telegram's third annual hill-climbing contest, held Saturday afternoon, was by far the most successful event of its kind ever held in this section of the country. There were forty-two entries, and the card was run off without a hitch. The course was up what is known as Brigham street and was 1 mile in length, with a good grade all the way and with a sharp turn at the last quarter. There was one dispute. Samuel Newhouse, who gave the $1,000 trophy in the free-for-all, protested against the award of the cup to the Sharman Automobile Co., which entered both the Apperson and the Stoddard-Dayton. Newhouse contends that Driver Frank Seifert held back the Apperson in order that the Stoddard might win. A Thomas made an exhibition run up the hill in :56⅘. Summary of the climb:

First event, $800 class—Won by Hupmobile in 2:26⅘.

Second event, $1,200 class—Won by Ford, time, 1:48⅘; Buick 10, second, time, 1:51.

Third event, $1,600 class—Won by Stoddard-Dayton, time, 1:45⅘; E-M-F, second; Overland, third; Buick, fourth; Cadillac, fifth.

Fourth event, $3,000 class—Won by Stoddard-Dayton, time, 1:11⅘; Buick, second; Winton, third; Premier, fourth; Buick, fifth.

Fifth event, $4,000 class—Won by Apperson, time, 1:05; Stoddard-Dayton, second; Thomas 40, third; Palmer-Singer, fourth; Buick, fifth; Premier, sixth.

Sixth event, $2,000 class—Buick and Velie tied for first, time, 1:25; Stoddard-Dayton, third; Buick, fourth; Overland, fifth.

Seventh event, free-for-all—Won by Stoddard-Dayton, time, 1:08⅘; Palmer-Singer, second, time, 1:11⅘; Apperson, third, time, 1:12⅘; Premier, fourth; Buick, fifth; Thomas Flyer, sixth; Packard, seventh; Velie, eighth; American, ninth; Studebaker, tenth.

FLANDERS CREW AT WORK WITH MATTOCK ON DANGEROUS STUMP IN MEXICO

On the Under Three Flags Trip

QUERETARO, Mexico, July 28.—The Under Three Flags trip of the Flanders 20, which now is engaged in the final lap of the trip from Quebec to Mexico City, has developed into a test of men rather than car—a fact which was emphasized by the order of Pilot Lane that the car would remain here a day or more, pending the time when the members of the crew might become sufficiently rested to proceed without danger of complete physical collapse. Both men with the car were in a state of exhaustion when the car arrived yesterday. During the last 28 hours of the trip the car was able to cover but 50 miles between the stops, which were of momentary occurrence, pending the improvement of the trail to an extent which would make travel possible. Ruts and washouts that were more than hub-deep had to be filled in with brush; rocks more than a foot high had to be evaded, rolled out of the path or else built up with an approach and an amelioration of the jumping-off place.

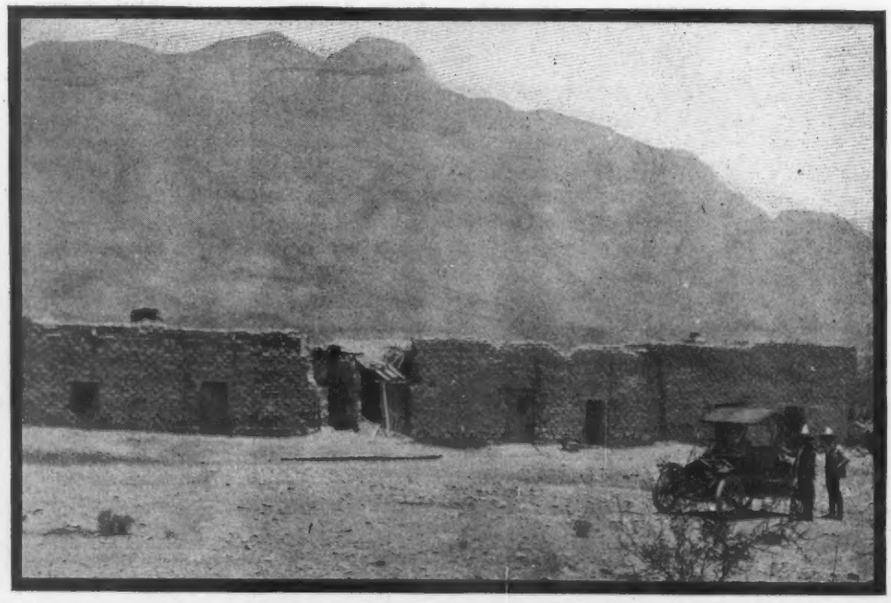
The car carried into Mexico one road-making tool—a light mattock. This has been found amply sufficient. The vertical edge serves as an axe to cut brush and grub out stumps; the horizontal edge is an excellent medium to employ while knocking the tops of the banks of an arroyo into the middle. While one member of the car swings the mattock, the other usually piles rolling rocks into the low spots of the road, removing them whenever possible from the loftier portions. In this way it is possible for two men to construct a rough sort of trail almost anywhere.

Of course the going over one of these extempore pieces of road is far from ideal and the car is forced to bump along over minor obstructions and climb rather precipitous banks. This feature has been the least of the troubles, though.

Another feature of the trip which has tended to sap the energies of the crew has been the necessity for subsisting on a combination of camp cookery and native food. The delay necessary in the preparation of the former has driven the crew to the latter, as a rule, and the result has been far from satisfying to the inner man. Better chile con carne can be obtained in any American city than the common brand current in the small villages in Mexico, though the dish is supposed to be typical of the national appetite. All milk is boiled, owing to the absence of ice. The succulent bean and the excellent native bread were the life-savers of the party, however, and the tortillas, which much resemble the corn cakes of the good old U. S. A., are not so bad.

American canned goods can be obtained in nearly all the Mexican towns, though a large percentage gives grave offense to the olfactory nerve; in fact, the crew is not likely to forget one scheduled banquet at which a can of salmon was due to afford the main entree. One whiff was enough. Before camp was broken a native dog was observed in the middle distance, galloping away with the salmon can in his mouth, his destination being his owner's home, where he and his contribution were welcomed with loud Castilian acclaim.

In spite of all the handicaps, the trip had, up to the arrival here, missed but 2 days from the opportunity of adding something to its mileage. These were spent at Laredo, Tex., pending the issue of bonding papers by the Mexican customs.



RANCH OF SENOR RODRIQUEZ, WHO IS INSPECTING FLANDERS CAR

UNDER THREE FLAGS CAR IN BED OF DRY RIVER EN ROUTE TO CITY OF MEXICO

Boston's Big Motor Tea Party Over

BOSTON, MASS., Aug. 2—Special telegram—In an endeavor to exclude motor vehicles from the parkways of Boston, Mayor Fitzgerald, of Boston, stood alone when it came to final question with the result that the highway commissioners of the state in no way approved of the ruling of the parkway commissioners of the city of Boston after a public hearing at the state house. Mayor Fitzgerald strove to make the state pay over a greater revenue to the city and, failing in his endeavor, he issued an order excluding all motorists and motor vehicles from the Boston parkways. After a public hearing at the state house before the highway commissioners the latter found the mayor wanting in many ways and in no way approved of the order, and issued a statement to the effect that all motorists would be perfectly free to use the parkways and highways of the state. In summing up the case the highway commissioners of the state found that Mayor Fitzgerald was the only one that stood for the exclusion of the motor traffic from the parkways of the city.

CROSS-COUNTRY RUN ENDS

San Francisco, Cal., July 30—After 10 weeks of travelling, Miss Blanche Stuart Scott, of Rochester, N. Y., has successfully ended her long journey. She left New York city the middle of last May in her Overland runabout. Accompanied only by a woman companion she set out to make the journey hitherto attempted only by seasoned motorists in specially equipped cars. Miss Scott did not try to make a speed record for the tour. She merely made a good day's run every day. From 75 to 200 miles completed her daily schedule. As far as Denver she followed the beaten path of other transcontinentalists. After that, however, she struck out across the Red desert and the Great American desert. She crossed Medicine Butte, one of the highest ranges in America, at midnight. She was lost for a whole day on the desert. In the east her path was beset by constant rain and storms. In the west she had to contend with the stifling heat of the deserts, where no rain has fallen since last February. The distance covered was 5,200 miles.

HOTEL AT SANTA CATARILA, WHERE FLANDERS CREW PASSED A NIGHT

ABERNATHYS FINISH TRIP

Oklahoma City, Okla., July 29—This is the home of two of the most remarkable youngsters in the country—the Abernathy kids, who have just completed a round trip to New York city, where they greeted Colonel Theodore Roosevelt on his return from the jungles. While this in itself is sufficient to make the lads the envy of all youngsters in the universe, still more honor was achieved by them. After a tedious, tiresome drive astride bronchos from their home to Gotham, the boys discarded their ponies for a Brush runabout in which to make the return journey.

Yesterday Louis and Temple, who are 9 and 6 years old respectively, were given an ovation on their arrival at the Oklahoma metropolis, the like of which was never before equaled—not even when Colonel Roosevelt himself as president made an official visit to the city. The boys made a record run from Omaha to Oklahoma City, leaving the former city Monday morning and arriving home Thursday afternoon. Night stops were made at Kansas City, Emporia, Kans., and Wichita, Kans. The speedometer indicated 2,315.2 miles when the trip ended.

The Readers'

EDITOR'S NOTE—In this department Motor Age answers free of charge questions regarding motor problems, and invites the discussion of pertinent subjects. Correspondence is solicited from subscribers and others. All communications must be properly signed, and should the writer not wish his name to appear, he may use any nom de plume desired.

ATTACHING A KLAXON HORN

NEW WORK CITY—Editor Motor Age—A light aluminum dashboard affords a poor support for heavy objects like searchlights and heavy electric horns. The accompanying sketch and photograph show how a Klaxon was successfully mounted on a curved aluminum dash. The principal object was to distribute the strain due to the vibration of the horn over a considerable area of the aluminum instead of concentrating it at the three bracket bolts. The bracket itself was a casting of curved form, which was fitted to the dash with little filing, but the back of it was hollow, so that it bore against the aluminum only at the edges and small end. This would have resulted in the bolts forcing the aluminum into the hollow space unless means to prevent this were taken. Aside from this the aluminum would have crystallized and crumbled around the bolt heads. A strip of hard pine A, 1⅛-inch thick by 2 inches wide and 6 inches long, was shaped, Fig. 1, to fit the inside curve of the dash. It then was bolted to the dash by top and bottom 5/16-inch bolts, under whose heads were placed leather and iron washers to distribute the pressure against the aluminum. The three holes for the bracket bolts then were located and drilled. A piece of thin rubber matting—leather or single-ply rubber packing would have done as well—was cut 1-16 inch larger all around than the base of the bracket, and was laid between the bracket and the aluminum. The bracket B was then bolted through the aluminum and the wood strip. The car has since run several thousand miles. The horn is far more rigid than would have been expected, and the aluminum shows no sign of bending or weakening.—H. L. Towle.

ST. JOE TO MINNEAPOLIS

St. Joseph, Mo.—Editor Motor Age—Will Motor Age kindly publish a favorable route between St. Joseph, Mo., or vicinity and Minneapolis, Minn., if possible, or put me in connection with some party that could give me the route desired.—Henry C. Buckingham.

A good route to follow from St. Joseph to Council Bluffs is that recently passed over by the Gildden tourists, which is through Savannah, Maryville, Wilcox, Burlington Junction, Tarkio, Shenandoah, Randolph, Tabor, Glenwood to Council Bluffs. From this point on Motor Age suggests that you follow the main-traveled route from Council Bluffs to Marshalltown, which passes through Crescent, Honey Creek, Loveland, Missouri Valley, Logan, Woodbine, Dunlap, Dow City, Dennison, Vail, Carroll, Glidden, Jefferson, Beaver, Boone, Ames, Nevada, State Center, then Marshalltown, Iowa. From here to Mason City the towns passed through are Albion, Eldora, Iowa Falls, Hampton to Mason City, thence to Minneapolis via Albert Lea, Minn., and Owatonna, traversing a route through Manly, Kensett, Northwood, Glenville, Albert Lea, Geneva, Owatonna, Milford, Faribault, Dundas, Northfield, Farmington, Rosemont to Minneapolis. For detailed road directions and odometer readings, etc., Motor Age refers you to the Official Automobile Blue Book Pub. Co., Chicago.

USE TIRE PROTECTORS

Lexington, Miss.—Editor Motor Age—For the information of XX, Richmond, Va., I will say that I have just sold a car equipped with Standard tire protectors made in Saginaw, Mich., 34 by 3½, that, after over 3,000 miles of most satisfactory service without a puncture or trouble of any kind, showed no appreciable wear and are still running. They are made entirely of rubber and fabric—no metal studs—and are held on tight by the inflation of the tire. I am sure your correspondent will be highly delighted with them if he will place them on his tire.—Hal A. Gilliam.

CHANGING TRANSMISSIONS

Coats, Kan.—Editor Motor Age—Through the Readers' Clearing House will Motor Age answer the following questions:

1—Can I install a three-speed sliding gear transmission in a model S Ford, which now has a planetary transmission, and if so, what type of clutch will have to be used, a cone or disk? Who builds a transmission that can be used?

2—What is the cause of a Wizard magneto not granting sufficient current to ignite a four-cylinder engine when it works perfectly on batteries, and how do the builders of these magnetos make them as good as new when you return them to the makers? Can they be repaired at home, and if so, how?—J. E. Bibb.

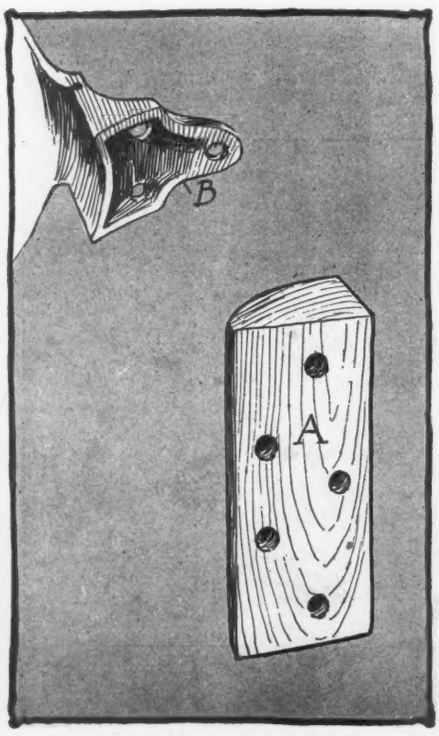


FIG. 1—BLOCK FOR DASH

1—Unless you have unusual facilities for changing the design of the Ford car as you suggest, it would be advisable not to try, as it would be a difficult and costly task. Still, if you insist on making the change, you might use either a cone or disk clutch. Motor Age has no records of any clutch or gearset applicable to the Ford power plant for the purpose mentioned.

2—The trouble with your magneto might be due to any of the following causes: The brushes may be worn out; they may be stuck or clogged in the brush holder; the brush springs may be weak so they do not bear firmly against the commutator; the commutator may be dirty—if so, remove the name plate and clean the commutator with a piece of fine sandpaper. The insulation around the screws which hold the brush holder to the tube may be broken or cracked. Perhaps carbon brushes are being used on a jump-spark magneto, when gauze or gauze combination should be employed. The friction leathers on the driving pulley may be worn so that it is not being properly driven. Failure to have the vibrators of the jump-spark coil adjusted to the output of the magneto will also cause trouble. Put the switch on the battery side and adjust your vibrators as light as possible, then throw your switch to the magneto side and adjust a second time as light as possible. Look for dirty or loose wire connections. If the magneto wires have ever been removed or the magneto itself disassembled for any purpose it is possible that when replaced it was not wired properly. There may be a broken primary cable or the insulation may be broken so that a leak occurs. It is possible that the magneto is improperly set so that there is slipping between the pulley and the flywheel. If at any time the magnets have been taken off or the armature removed the magnets may have become weakened and require remagnetization. The magneto should not be disassembled for any purpose. If you will write to the Hercules Electric Co., Indianapolis, Ind., manufacturers of the Wizard magneto, and give the number of the apparatus and make of the engine on which it is employed, they will endeavor to give you advice relative to your special case, and also send you a

Clearing House

EDITOR'S NOTE—To the Readers of the Clearing House columns: Motor Age insists on having bona fide signatures to all communications published in this department. It has been discovered that the proper signature has not been given on many communications, and Motor Age will not publish such communications, and will take steps to hunt down the offenders of this rule if it is violated

sheet of special instructions and a wiring diagram which, if carefully studied, will enable you to care for your magneto without further trouble. Magneto manufacturers are able to make their devices as good as new by replacing all those parts which may have become worn or otherwise rendered inefficient, and their facilities for repair are far greater than those of the ordinary repairman.

CURE FOR SLIPPING CLUTCH

Wellington, Kans.—Editor Motor Age—I noticed in Motor Age, issue July 14, page 18, an inquiry from Edward Roehlk relative to the clutch slipping on a Buick model 10. I had the same experience some weeks ago and on the advice of my machinist applied a liberal quantity of Neatsfoot oil, which immediately relieved the trouble. I have used it ever since for the clutch but in more moderate quantities. It seems that too much of ordinary oils renders the leather smooth and hard, while the Neatsfoot oil swells the leather up and makes it more spongy, thereby enabling it to take hold better.—X.

POWER OF OLDFIELD'S BENZ

Sau Claire, Wis.—Editor Motor Age—Will Motor Age kindly answer through the Readers' Clearing House the following questions?

1—What is the power of the Reo 1910 model R?

2—Give me the best motor route between Eau Claire and Duluth.

3—Where was Oldfield's 200-horsepower Benz made, and kindly give me a general description of it—Joseph Jorden.

1—According to the A. L. A. M. rating the model R four-cylinder Reo, having a bore and stroke of 4 and 4½ inches, respectively, would give 25.8 horsepower, but 30 horsepower is claimed for it by the Reo company.

2—The route from Eau Claire to Duluth is as follows: Leaving Eau Claire, go west 10 miles, thence northwest 7 miles, thence directly west 3 miles, to Menomonie. From Menomonie the route lies through Wheeler, Blairmoor, Ridgeland, Hillsdale, Barron, Poskin, Cumberland, Sheel Lake, Spooner, Chicog, Minong, Gordon, to Superior. For detailed information as to the route, Motor Age suggests that you communicate with the Wisconsin Automobile State Association, Milwaukee, Wis. At Superior you will undoubtedly be able to secure directions to Duluth from some of the local motorists or the motor club of that city.

3—Oldfield's big Benz was made in the factory of Benz & Co. at Mannheim, Germany. It has a four-cylinder motor with a bore of 7.2835 and a stroke of 7.8741 inches. The cylinders are cast in pairs, and the overhead valves are on opposite sides and operated from a single camshaft, which is on the right side. Two magnetos are used with a complete ignition system for each, there being one plug in each cylinder in each system, making eight plugs in all. Lubrication is by splash feed in the crankcase and by a hand pump, while the cooling scheme consists of a Benz radiator system and gear pump. There are four speeds with direct on high in the selective sliding gearset, from which power is transmitted to the rear wheels through a jackshaft and side chains. The tires are 32 by 4 inches in front, 34 by 5 in the rear, and the wheelbase is 108 inches.

REMOVING CARBON

Brookline, Mass.—Editor Motor Age—I noticed in the issue of July 14 Motor Age asked for experience with carbon removers, and I wish to state that, for the benefit of motorists, the best thing I have found for removing this troublesome carbon without injury to the engine is a device called the Bull Dog remover, which is a small chain made of special tough soft wire coils invented by E. S. Michener of New Castle, Pa. This chain, in conjunction with a little kerosene oil, is put into the cylinder through a spark plug hole,

FIG. 2—ATTACHING KLAXON HORN

and the engine is run by the power of the other cylinders. The effect of the chain caused by the motion of the piston, without the ignition on the cylinder being cleaned, is to scour off all the hard scale that forms on the piston head and cylinder walls. It is easily removed through the spark plug hole. It is simple to operate and inexpensive. I have used it in my four-cylinder motor with great satisfaction.—Andrew C. Shannon.

LOOK AT PLATINUM POINTS

Edina, Mo.—Editor Motor Age—Will Motor Age, through the Readers' Clearing House, tell me what is the trouble with my car which is a two-cylinder 20-horsepower model H D Maxwell, fitted with magneto and battery ignition. The motor will run on the battery all right, but when switched to the magneto with spark advanced it will not explode at all. It will run with the spark retarded on the magneto all right, but speed the motor with advance spark and the motor will stop.—Cletus R. Trober.

Your trouble is due in all probabilities to either a burning-out, pitting or maladjustment of the platinum points of the circuit-breaker of the magneto. If the spark control lever of the magneto is defective, or if the magneto recently has been removed from the motor or the gears unmeshed, it is probable that the timing is not correct. If the platinum points of the circuit-breaker are pitted, secure a very fine thin jeweler's file from some hardware store, insert it between the points, press the points together upon it and work it back and forth until a broad smooth contact is obtained. The thinner the file employed the better the contact obtainable. It might even be advisable to unscrew the contact-screw away from the lever a few turns before starting to dress down the points with the file, then if the surfaces are at an angle to each other so as to make contact only at one side, the screw may be adjusted so that the high-side of the screw contact will meet the low-side of the lever-contact. The Repair Shop page of this issue contains information relative to a Splitdorf magneto which will probably be of interest to you. Motor Age would like to hear from you relative to value of this advice.

NOT FOR LIGHTING

Colby, Kan.—Editor Motor Age—Will Motor Age please explain through the Readers' Clearing House if it will be possible to run electric lights from a Splitdorf or Bosch magneto in connection with the running of the motor, also if it will be injurious to the magneto?—D. A. Nelson.

No. The design of the Bosch and Splitdorf magnetos will not permit of their being used for lighting purposes. Even if it were possible to tap the primary circuit to get a current for lights, it is doubtful whether you would get enough current to make a light, and if you did there would be none left for ignition purposes.

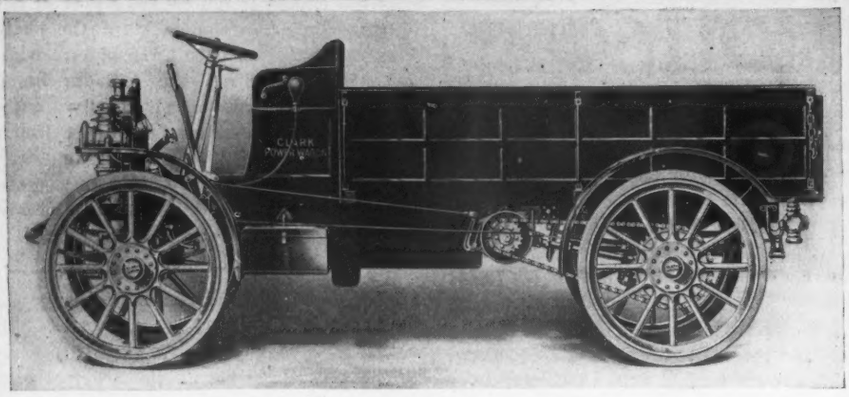


FIG. 1—SIDE VIEW OF NEW CLARK DELIVERY WAGON.

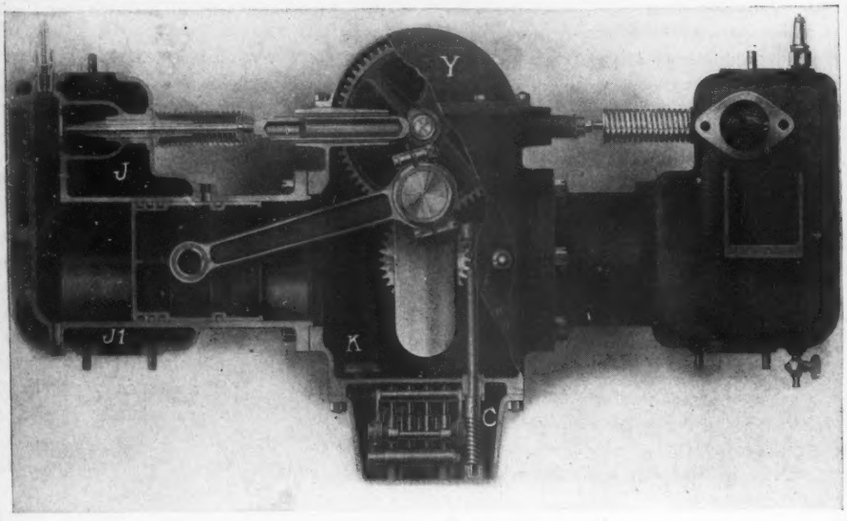


FIG. 2—VERTICAL LONGITUDINAL SECTION OF NEW CLARK MOTOR

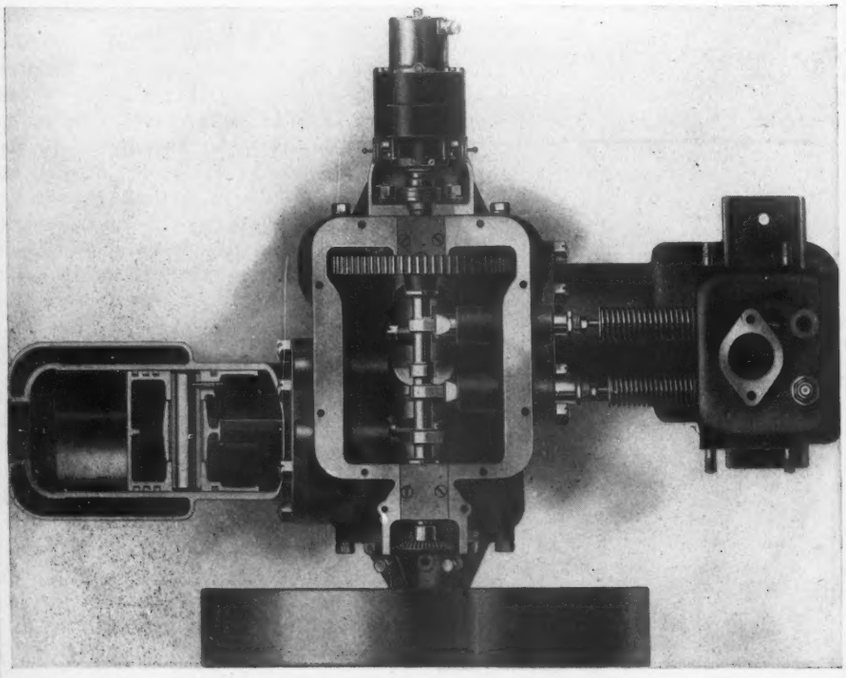


FIG. 3—TOP OF MOTOR, CRANKCASE REMOVED AND ONE CYLINDER IN SECTION

The Clark

THE beginning of the 1911 season finds another company in the field, which is devoting its exclusive energies to the production of a 1,500-pound delivery wagon, which it is expected will be made in large numbers for the 1911 market. The company is the Clark Power Wagon Co., Lansing, Mich., and the car is the Clark delivery wagon, built with a variety of bodies adapted for the various lines of commercial work. As Fig. 4 shows, the chassis of the Clark power wagon is the two-cylinder type, the motor located transversely across the front and transmitting its power through a cone clutch in the flywheel, a two-speed selective gearset and side chain drive to the rear wheels. Although this general analysis serves to acquaint the reader with the leading features of the car, it fails in many respects to give an accurate conception of the workmanship bestowed upon it and the materials used in it, all of which stamp the Clark power wagon as being a permanent product. This is evidenced in the use of F. & S. annular ball bearings employed for carrying both shafts of the gearset as well as the jackshaft. It is rare that bearings of this type are found in delivery wagons of this style. In addition to this a U. & H. high-tension magneto is a regular portion of the ignition equipment.

The Clark motor is a two-cylinder, opposed type, shown in Fig. 2, the cylinders having 5-inch bore and 5½-inch stroke, which give 20 horsepower. The motor is conventional in design, each cylinder with its integral waterjacket bolting to the cubical crankcase K. To the base of this case is an oil compartment C carrying the oil pump P, and at the top of the crankcase is a removable cover plate Y, which discloses the timing gear, the camshaft and the valve pushrods, this cover plate being removed in Fig. 3. Strength has been looked after in this motor: To begin with, the crankshaft is made 2 inches in diameter and, as shown in Fig. 5, there is an integral flange to which the flywheel bolts. This figure shows the bearing proportion used, both camshaft and crankpin bearings being 2 inches in diameter and of the length in inches shown in that illustration. The camshaft is carried on two large, plain bearings, and has these bearing surfaces as well as the cam surfaces finished by a hardening process and final grinding. It will be noted from Fig. 5 that the U. & H. magneto M, as well as the timer, is driven from the camshaft, the magneto being directly joined through the coupling J, permitting of quick demountability and the timer at opposite end is driven through bevel gears. This is another evidence of the carefulness in designing of this motor. Still a further detail may be noted in the illustration, namely, the oil compartment C beneath the base of the crankcase. This oil compartment contains

New Truck

the pump P, driven by the vertical shaft P1, which in turn takes its drive from the crankshaft. The oiler is a multiple-pump type, which forces oil direct to the piston and main bearings of the crankshaft. The overflow oil from these points lubricates the cylinder walls and connecting rods with the exception of the engine connecting rods, which are oiled through the crankshaft, the crankshaft being drilled for this purpose the same as in a modern four-cylinder motor. The oil compartment C, in which the lubricator is located, contains 3 gallons of oil, and all oil from the crankcase is returned to this compartment. Being filtered en route, it will be noted from this system there is no splash within the main portion K of the crankcase, consequently the danger of a smoky exhaust is eliminated. The oil pump P is non-adjustable, but from it oil is delivered to the bearing at the rate of thirty drops per minute, which is considerable in excess of the necessary amount. Not only in the matter of having oil reach the bearings, but also in having it returned to the crankcase without leaking, has been looked after. There is on each end of the crankshaft an integral oil ring Z, which prevents oil leaking out of the end of the bearing, due to the fact that this oil ring is of larger diameter than the shaft and so throws the oil off by centrifugal force, the oil being returned through the channel Z1 to the crankcase. A similar scheme to prevent oil leakage is furnished at the opposite end of the crankshaft.

Hand in hand with the matter of lubricating the motor is that of adequately cooling it, and in this respect the Clark company has given the necessary attention. Water circulation is by thermo-syphon means, and the waterjacketing spaces are large, as may be noted in Fig. 2 at J, where the ample water space between the cylinder wall and the valve is shown. There is also a liberal space J1 surrounding the cylinder during that part of its length traveled over by the piston rings. Fig. 4 shows the general scheme of cooling, in which a separate water pipe leads from the top of each valve port to a point on the radiator.

A double ignition system is fitted, the first being the U. & H. magneto referred to; and in addition is a secondary system with battery current, single-unit coil and timer-distributor. A double set of spark plugs is used. A point about the battery is that it is hermetically sealed and is guaranteed to serve 1 year for starting purposes only. The magneto is set on the advance at a point which will produce maximum efficiency, and its control is not under the operator, the fixed spark being looked upon by the designer as a superior quantity in the delivery car to a variable spark in the hands of inexperienced drivers.

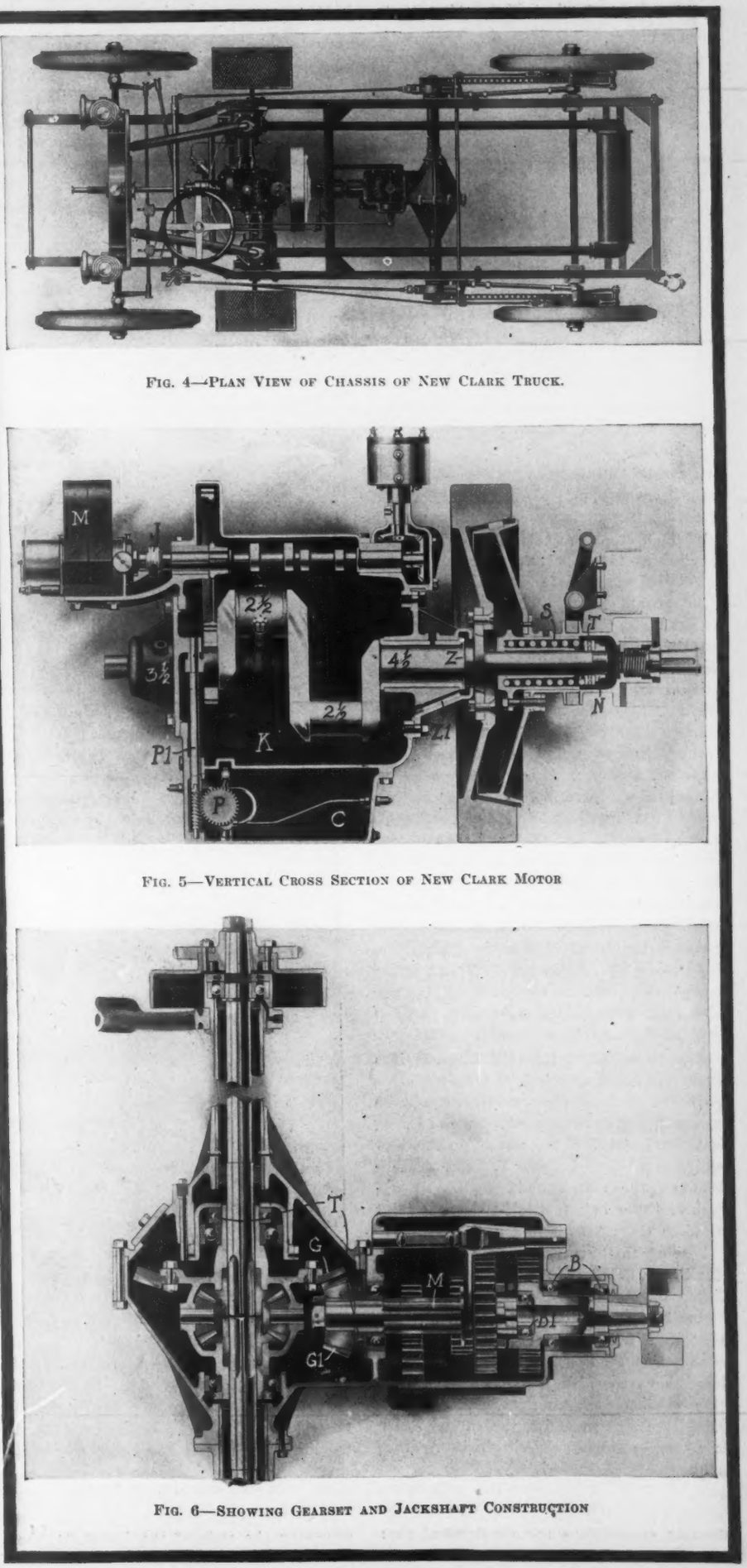


FIG. 4—PLAN VIEW OF CHASSIS OF NEW CLARK TRUCK.

FIG. 5—VERTICAL CROSS SECTION OF NEW CLARK MOTOR

FIG. 6—SHOWING GEARSET AND JACKSHAFT CONSTRUCTION

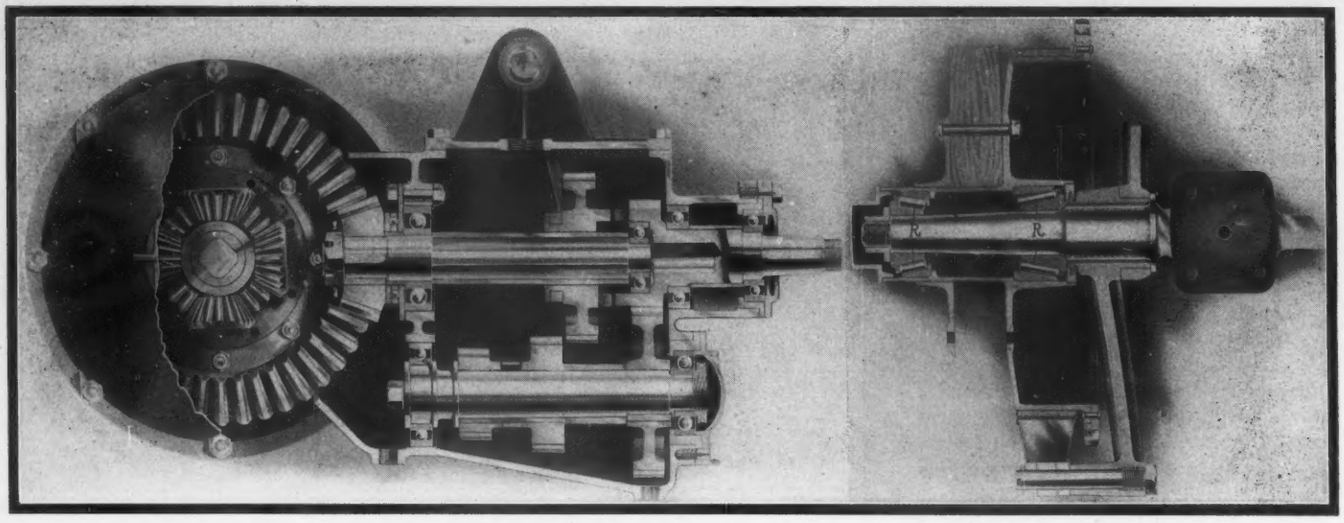


FIG. 7—SHOWING A VERTICAL SIDE SECTION OF CLARK TRANSMISSION GEARING, AND ROLLER BEARING EMPLOYED IN WHEELS

Passing to the transmission of the car, Fig. 6 shows the two-speed selective gearset together with the differential on the jackshaft employed as a unit, which is suspended at three points. The use of two speeds is claimed to be sufficient for a 1,500-pound wagon. The maximum speed is put at 15 miles per hour, the gear ratio on direct drive being 9 to 1, and on second speed 18 to 1. The general use of F. & S. annular ball bearings throughout this gearset, and also shown in a vertical illustration of this set, Fig. 7, cannot be overlooked, these bearings being used as freely as in the high-priced pleasure car of today. In addition to radial bearings there is a double bearing B carrying the short shaft and a bearing B1 within this shaft and carrying the forward end of the mainshaft M of the set. The care of manufacture is also shown in the presence of two thrust bearings T, which absorb the thrust occasioned by the bevel gear G meshing with the pinion G1. As in the motor, so in the transmission special facilities for lubrication have been looked after and parts of special sizes have been used.

The clutch located in the flywheel is a cone type with cork inserts. Its action is governed by a 200-pound compression spring S, Fig. 5, the tension of which spring is under control of the nut N, in front of which is a thrust bearing T. The distance between the clutch and gearbox is 9½ inches, there being a self-adjusting joint between them for alignment.

Passing to the running gear of the car, it will be noted in Fig. 1 that a pressed frame of channel section is used, which frame being made of 2/16-inch stock with a channel 3¾ inches vertical depth and with horizontal lips 2 3/16 inches wide. The frame is narrowed in front of the motor to give a shorter steering radius, the result being, the makers claim, the car will turn in a smaller diameter circle than any other commercial car in its class. The steering gear is of the Ross type, the gear being integral with its shaft. The parts of the steering connections are constructed that renewals may be made by changing only the worn sections. All ball connections are directed upwards to guard against the possibility of accident should the steering rod screws become loose. The steering wheel is 18 inches in diameter and the throttle control is mounted beneath it. Supporting the framework of the car is a forward set of semi-elliptic springs 38 inches long and with leaves 2 inches wide. A three-quarter platform spring supports the rear, the side members being 42 inches in length and the cross member 37 inches. Both front and rear axles are I-beam construction with 2¼-inch vertical depth. These axles have integral spring seating. The wheels are 36 inches in diameter and are carried on tapered roller bearings. Fig. 7 shows the two races of bearings supporting the rear wheel. The bearings used are G-17 on the inside of the hubs and G-12 on the other side. Firestone side-wire tires are fitted, the size being 36 by 2½ inches Q. D. demountables. Where pneumatic tire equipment is used an extra charge for them is made. The brakes are furnished in two sets, a pedal control set applying on 9-inch drums on the ends of the jackshaft, these drums having 1¾-inch face. The emergency brakes, lever applied, are clamping bands operating on drums 13 inches in diameter and 2¼-inch face on the rear wheels. Both sets of brakes are of the contracting-band type.

With commercial vehicles control is an important feature, and in this respect the left-hand control fitted on the Clark wagons is in conformity with modern practice. The control consists of clutch and brake pedals, gear shifter and emergency-brake levers, and the throttle control beneath the steering wheel. The wheelbase measures 102 inches and the truck weight is given at 2,000 pounds.

THE 3-TON ELECTRIC TRUCK NOW MANUFACTURED BY WAVERLEY COMPANY.

Ample provisions are made for convenienty keeping all external or outboard bearing of the car lubricated.

COMMERCIAL BREVITIES

About fourteen passengers a day on the average are being carried on the new Medford-Crater lake stage route in Washington. The distance is 86 miles and is covered in about 7 hours. The survey of the motor boulevard to the lake has been completed and work will be commenced shortly. At Prospect, Ore., half way between

Crater lake and Medford, the facilities for obtaining meals and sleeping quarters are now first class, and at this point good fishing and hunting can be had. About $5,000 has been spent on the Crater lake road this year, and it is now possible for any car to go over it. There are now only two bad grades, and these are now being cut down from 22 and 24 to 14 per cent.

The First National bank of Boston recently placed an order with the General Vehicle Co. for a steel-lined electric motor banking wagon for the safe and economical delivery and collection of its customers' funds. Inside the steel cage is arranged a patrol wagon seat on which two guards and a messenger will ride. The door to the steel cage is provided with a heavy lock.

A Large Delivery Truck Built by the Packard Company

August E. Rusch, rural mail carrier on Route 3 out of Reedsville, Wis., is now using a runabout in his work. He is the first rural carrier in Manitowoc county to use the motor car. In many other parts of Wisconsin rural carriers have been using cars for several years, and instead of having to work 8 hours a day now complete their labors in less than 3 hours.

Following the purchase of a motor car by the Wisconsin state board of control for the use of the steward of the Mendota hospital for the insane, it has been decided to establish a bus service between the nearest railroad station and the institution. The utility of the motor car became apparent at once, and the bus service came as a consequence. A fare of 10 cents each way is charged, making the service more than self-maintaining, the daily average of visitors being fifty.

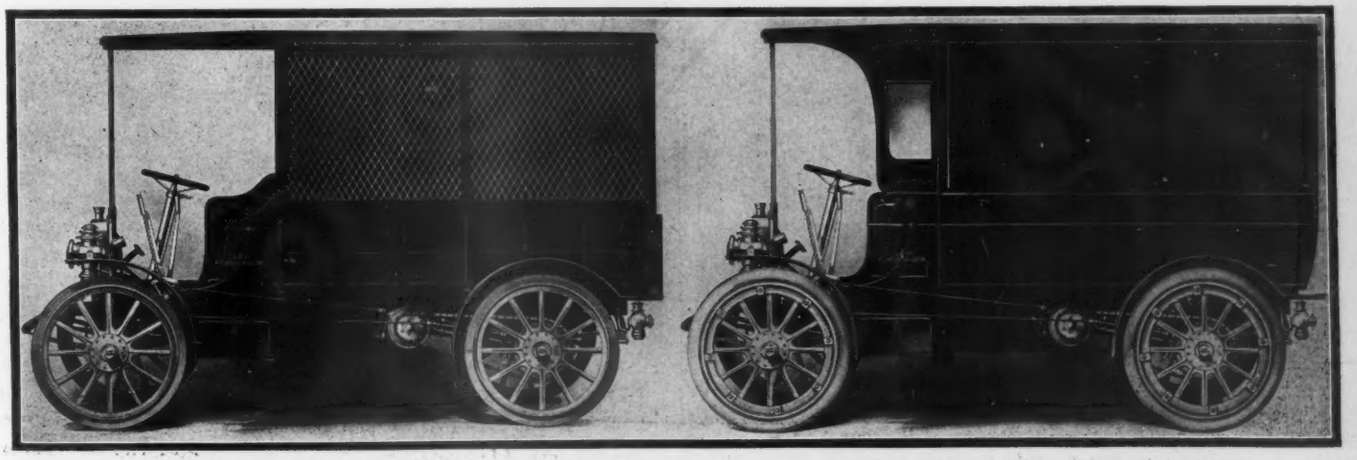
It is probable that a motor ambulance will be added to the equipment of the police department at Milwaukee, Wis., within a short time. The police department now has a touring car for the use of the detective force, while other city departments have been provided with cars, making a total of about fifteen. The committee on police of the common council has recommended the purchase of an ambulance car at a cost of not to exceed $3,500. At present a one-horse ambulance is being used.

The city of Racine, Wis., will purchase a combination ambulance and patrol truck at once. Statistics compiled by the police department show that the truck would pay for itself in 2 years. A selection will be made about August 1.

Captain Charles C. Healey, of the Chicago mounted police, who was sent to Europe at the instance of the Chicago Association of Commerce to study traffic conditions there, has submitted his report to the association and to Chief Steward, of the police department. He has made a number of suggestions which, it is expected, will be adopted by the city, with a view to relieving the congestion in the business section. One of these is that the use of motor wagons be encouraged. Captain Healey studied traffic conditions in London, Paris, Berlin and other European centers. His trip consumed 72 days, and all expenses were borne by the Chicago Association of Commerce.

Chief John T. Mertz, of Akron, O., has reported to Safety Director C. C. Benner to the effect that motor fire apparatus is cheaper and saves the city more money than horse apparatus. Mr. Mertz's report is based on figures giving the cost of operating two fire stations in the city, the last one established having motor apparatus entirely. At No. 4 station, the one equipped with horses, the total cost of operation for 6 months ending July 1, 1910, was $8,440.86, of which $7,680 was for salary of eight men. The greater part of the other cost went to horse feed. This department responded to seventy alarms, traveled 114 miles and worked 32½ hours pumping water in that time. At No. 8 station, which is equipped with a triple combination motor fire apparatus, the total cost in 6 months was $5,784, of which $5,652 was for salaries of six men. The gasoline consumed amounted to 559 gallons, at a cost of $64.29. Engine oil costing $32.50 was consumed, while the cost of repairs on apparatus was $27.65, compared to $25.50 for the horse-drawn apparatus. Safety Director Benner estimates that $24,000 could be saved in the entire city in a year by substituting motor apparatus.

Photographs are shown of a large 3-ton Waverley electric truck, which is now being used by the Prest-o-lite company, of Indianapolis; and a Packard gasoline truck of enormous size in the service of the Union Oil Co., of California.



Wire-Sided Type of Clark Enclosed Delivery Wagon and Clark Delivery Wagon with Enclosed Panel Type Body

From the

DATES Selected—The Omaha World-Herald endurance run will take place August 24-25.

Will Use Convicts—Oregon convicts from the state penitentiary will be put to work shortly on the new Columbia road between Portland and the Dalles. By working the county prisoners the cost of the road will be reduced one-half. Multonomah county, Oregon, is expending $120,000 annually on roads in that county.

Munsey Tour Entries—Five more cars were entered last week in the Munsey tour, bringing the entry list up to twenty-five. The additions were two Maxwells, entered by the United States Motor Co., a Staver-Chicago, by the Staver Carriage Co., a Stoddard-Dayton, by Leo H. Shaab, the Baltimore agent, and a Crawford by Walter Scott, of Baltimore. The entries will close at midnight August 5, at which time it is expected more than fifty cars will be enrolled. The technical committee was selected this week. It consists of E. L. Ferguson, who will also be the referee, Joseph Tracy and J. A. Hemstreet.

Good Work—The Manitowoc County Automobile Club has started a determined campaign for the strict enforcement of the signboard law in Wisconsin. Arrangements have also been made to instal signs at the expense of the club at all dangerous places, and warnings of sandy roads, bad water, bars, etc., which the law does not reach. The common council of Manitowoc has been petitioned to use only fine gravel in surfacing streets, and to remove the coarse gravel and stones. Although of but recent origin, this club is attaining a state-wide reputation through its militant course in law-enforcement and seeking to give equal rights to all as their interest demands.

Holding Down the Pace—That the Brooklyn reliability contest, which is to be held on Long Island, August 9 and 10, will be an unique affair is evident from the plans formulated at a recent meeting of the Brooklyn Motor Vehicle Dealers' Association, under whose auspices it is to be held. The manner of awarding the trophies offered for the contest has brought out an idea that, when put into practice, will result in eliminating speeding and will evolve a winner in the various divisions of the contest section. In brief the plan is that the contestants will compete on a time schedule fixed by the contest committee before the start. Each participant will be told the number of miles per hour he is to travel, as well as the mileage distances between controls and the participant whose car averages the most consistent running time to that schedule will be declared the winner in each division. Hidden controls will be established at several points along the route and only Referee A. R. Pardington will know their location. The time that each car passes a secret station will be recorded and it will be this time that will prove the winner. In addition to being checked in at the hidden controls, cars will be checked also at the noon and night controls.

Regal, Not Brush—The official car in the recent Denver Post reliability run was a Regal, not a Brush, and the illustration published in Motor Age should have been so captioned.

Opening Wedge—The advent of the motor car into the Hood river country was made about 3 years ago when a motor stage line from Hood River to Cloud Gap inn at Mount Hood was introduced. With the success of this venture, the motor has steadily gained in prestige among the fruit men of the fertile valley.

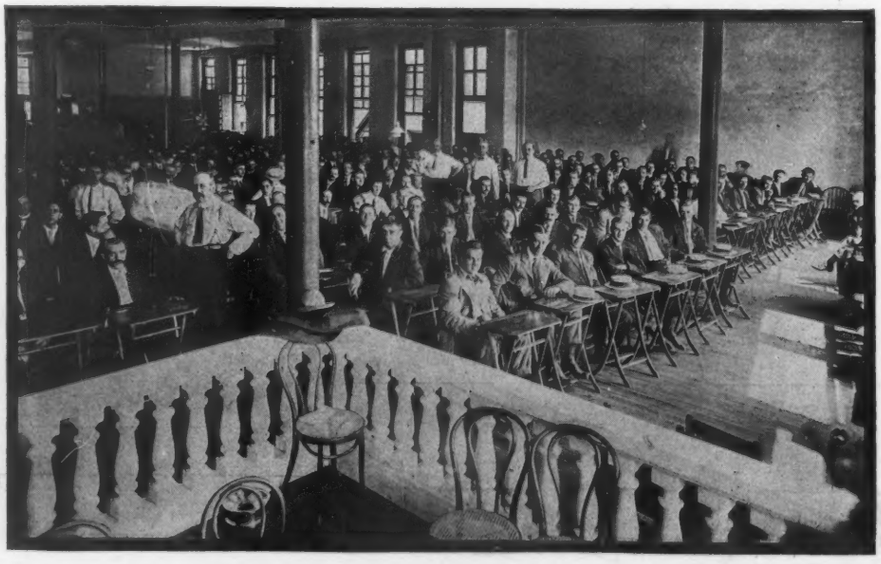
Here's a Market—There are now upward of ninety cars in the Hood river valley, Oregon. Nearly all of the prosperous orchardists of the valley either now have cars or are contemplating getting them. Not alone are the farmers buying cars for pleasure, but many of the farmers are considering the purchase of motor trucks to facilitate the handling of crops to market.

Cars as Strike-Breakers—Motor cars played an important part in quelling the many riots in Columbus during the past week, incidental to the street car strike. Many cars were pressed into service by Mayor George S. Marshall to convey the police department to quell sudden disturbances and the strike shows the utility of motor cars. One of the unique features of the strike was a Colt's machine gun mounted in the front of a large car and commanded by Captain H. M. Bush. The car equipped with the rapid fire gun was used effectually in stopping rioting, although the gun was not placed in action. It was manned by four artillerymen under the command of an officer.

NEW YORK CHAUFFEURS TAKING CALLAN BILL EXAMINATION—INSPECTOR COMPARING PHOTOGRAPH OF APPLICANT AND FACE

Tracy Resigns—Owing to the pressure of other business Joseph Tracy has resigned from the position of assistant chief examiner of chauffeurs in New York under the new Callan law.

Politicians Recognize Motoring—The Democratic state convention at Omaha, Neb., last week incorporated in the party state platform the two following planks relating to good roads and motor cars: "We believe that the prosperity of any country is in direct ratio to its facilities for communication and transportation. We therefore favor the enactment of a more effective system of road laws that will provide for state and county aid in the construction of permanent wagon roads. The rapid increase in the use of the motor



NEW YORK CHAUFFEURS TAKING EXAMINATION FOR LICENSES AS REQUIRED BY THE NEW CALLAN MOTOR LAW WHICH HAS JUST GONE INTO EFFECT

Four Winds

INTERPRETERS ARE REQUIRED IN CALLAN CHAUFFEUR EXAMINATION BECAUSE OF THERE BEING MANY FOREIGN DRIVERS IN NEW YORK

car as a means of travel necessitates such legislation as will protect the public against accidents resulting from reckless, immature and inefficient drivers."

More Signboarding—The Omaha Automobile Club is placing road signs pointing the way on all roads leading into Omaha, Neb. The work is being done under the direction of E. H. Sprague, president of the Omaha Automobile Association.

New Grounds for Suit—Omaha motorists would have been beset with a new menace if a suit brought by William R. Craig, in the county court at Omaha, had been successful. Craig asked for $200 damages on account of the shock to his nerves sustained by seeing George R. Young, riding in a motor car headed straight into another car which was moving down upon him. A collision followed, which was not serious, but Craig said the mental strain of witnessing the impending wreck was such that he was entitled to damages from the motorist, Young. Craig was not in either car, and the court held against his claim.

Pandora Uses Oil—Ten thousand gallons of oil have been sprinkled on the streets of the village of Pandora, O., to allay the dust nuisance resulting from the extreme dry weather of the past few weeks. It is one of the most progressive little towns in northwestern Ohio.

Starts on New Home—Work has been started by the Milwaukee Automobile Club on the erection of its new clubhouse, to cost $14,000. The club will occupy the center of a large wooded tract at Blue Mound and Cottrill avenues, west of the city limits. It is expected to be ready for occupancy by October 1.

Popes in Vanderbilt—William K. Vanderbilt, Jr., president of the Motor Cups Holding Co., which is to hold the Vanderbilt cup race on October 1, announces the entry of two Pope-Hartford cars of the 1911 model. One of these cars is entered by H. Emil Holp, of New York, while the second car is entered by B. C. Fincke, of Short Hills, N. J.

Mail Collectors Scorchers—James A. Collins, judge of the Indianapolis police court, recently followed one of the mail-collecting motor cars used by the postoffice to determine whether or not it was necessary for the drivers to violate the speed laws in order to maintain the government schedule. The actual running time for the 21 miles was mostly at the rate of 35 miles an hour, while the law provides 20 miles. At this excessive speed the mail car finished 2 minutes behind the schedule. Judge Collins holds the postal authorities responsible for the high speed maintained by the mail cars in doing this work.

AT NEW YORK CHAUFFEUR BUREAU HEADQUARTERS—ROOM WHERE LICENSE BOOKS ARE KEPT UNTIL ASKED FOR BY CHAUFFEURS

Job for the E-M-F—An E-M-F has been selected for the pathfinder for the 800-mile reliability tour to be held under the auspices of the Automobile Club of Buffalo, September 7, 8, 9 and 10.

Melts Patches—Wilmington, Del., motorists are encountering a new kind of tire trouble on the section of the Delmarvia peninsula known as the eastern shore of Maryland. On some of the roads they find that because of the peculiar concistency of the sand it gets so hot in genuine summer weather that it melts the patches off the tires.

Orphans' Day in August—The Milwaukee Automobile Club is arranging for the annual orphans' outing, to be held during August. W. H. Pipkorn is in charge of the event, which this year will be bigger than any held in the past. Mr. Pipkorn expects to have 200 machines in line, and with this number will be able to accommodate every orphanage in Milwaukee.

Will Do It Next Time—The first conviction in Nebraska under the new state law, making it a misdemeanor for a motorist to fail to stop when signalled by a horseman on the county roads, was secured in Omaha last week. Ed. Kirschman was fined $25 for failing to stop his car which was frightening the horses of Hans C. Glissman, who signalled Krischman to stop.

Encouraging Road Work—Horsemen and motorists, headed by James Rose, of Lancaster, Pa., have been formulating plans for a $1,000 prize to be divided among the supervisors of Lancaster county, Pa., who show the most progressiveness in their road-making throughout each of their respective townships. The general plan of this prize contest is to be based upon a division of the Lancaster county townships into groups of three, each group of three to be termed a section. Each section will be closely inspected by three judges, one of whom will act as secretary for that section. The judges will go over all roads coming under competition in their respective section, regarding which they will be notified at a later date. A period of 2 weeks between the time of opening and closing of the competition will be permitted the judges to examine their respective roads. The judges will be required to enter the supervisor's name having charge of the respective districts examined in each township. The roads will be divided into five grades. Each grade will receive respectively a certain number of points per mile. Two demerits will be given for every water-breaker encountered on any road. Four demerits will be given for each mile of road made by the old-fashioned once-a-year road scraper method in which everything is pulled out of the side gutters including sticks, stone, sod and loose earth, and dumped into the middle of the road and left there unrolled.

Current Motor Car Patents

TWO-CYCLE Motor—No. 963,366, dated July 5; to Emil Gathmann, Bethlehem, Pa. The characteristic features of the two-cycle motor to which this patent relates are, as illustrated in Fig. 1, an annular exhaust port X, an inlet channel C in the piston whose opening into the combustion-chamber of the cylinder is concentric therewith, and a fan F in the crankcase adapted to increase the suction of fuel thereinto. In operation, with the moving members of the motor in positions shown, the piston P has just been forced down to the bottom end of its stroke by the explosion in the cyclinder R; the exhaust gases are passing out through the annular passages X; and the fresh fuel mixture which was compressed in the crankcase by the descending piston is passing up through the channel N in the cylinder wall and the channel C in the piston, and entering the cylinder R. As the piston ascends, the exhaust and inlet openings in the cylinder walls are covered by the piston and the fuel mixture above the piston is compressed, while at the same time the vacuum produced in the crankcase, both by the fan F and the piston, opens a valve concentric with the crankshaft and admits a fresh mixture of fuel to the crankchamber. Passing over the top center the compressed charge in the cylinder is ignited and the cycle repeated.

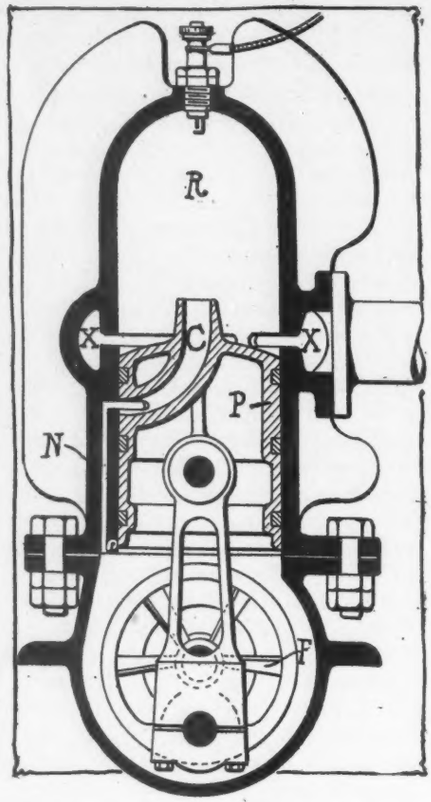


FIG. 1—NEW TWO-CYCLE DESIGN

Electric Lamp Socket Support—No. 963,647, dated July 5; to Herbert E. Plass, Newark, N. J. This patent covers an adjustable bracket for supporting the socket of an electric lamp which is adapted for use in converting oil or gas lamps into combination oil or gas and electrics. Its construction is shown in Fig 2, and it comprises a bracket B for attachment to the body of the oil or gas burner, a projection P with an adjustable block K thereon, two springs G secured to this block which support a vertical plate, and an electric lamp socket S pivoted to this plate. By loosening the set screws and sliding the block K forward or back, focusing of the electric-light is facilitated, and by swinging the lamp and socket into the position indicated by the dotted outline, it permits the use of the gas or oil flame. The springs G are provided to protect the filament of the electric lamp.

Spark-Plug Switch—No. 963,612, dated July 5; to Eugene D. Means, Towanda, Pa. This patent relates to a device adapted for attachment to the spark plugs of a motor which will enable the operator to open or close the spark-plug circuit for inspection or testing purposes without necessitating the removal of the high-tension cable. As illustrated in Fig. 4, it consists of a block B of insulating material with two metal plates P and PI secured to it, plate P being designed for attachment to the spark plug, plate PI having a binding-post for the high-tension cable, and both having lateral arms; a switch-lever L comprising two spaced members and an insulated handle is pivoted to one arm, and is adapted to engage and make electrical contact with the lateral arm of the other plate.

New Carbureter Design—No. 963,187, dated July 5; to Frederick W. Tuerk, Chicago, Ill. Although the carbureter to which this patent relates differs radically in the arrangement of the ordinary features of carbureter design, the most important feature or original characteristic is its vaporizing member which comprises a cup C and a plurality of wires spherically forming a cage V, Fig. 3. In operation, gasoline is admitted to the carbureter through pipe P, passes upward through a water and sediment trap W, and through a ball-valve into the float-chamber F. The float-mechanism is adapted to maintain a proper level in the well E which communicates with the spraying nozzle Z, the opening of which is determined by the adjustment of the needle valve N. At low speed the vacuum produced in the mixing chamber M by the suction of the motor draws fuel from the well E through the nozzle Z, and the current of air from the tube T assisted by the force of gravity, directs the fuel into the cup C. The cup C having apertures in its bottom, discharges the fuel onto the wires of the cage V from which it is easily vaporized, and the fuel mixture then passes on to the motor through the end D of the carbureter to which the inlet pipe is attached. An automatic auxiliary air-valve AV is provided to regulate the air supply and the carbureter is controlled by the butterfly valve B to which the lever L is fixed.

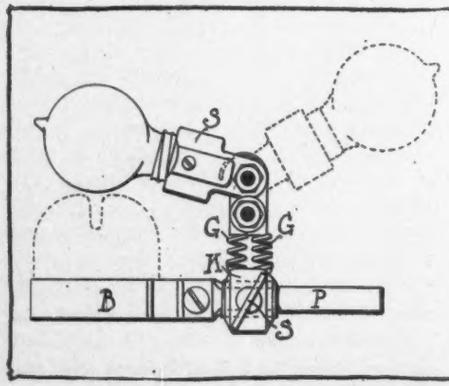


FIG. 2—ELECTRIC LAMP SOCKET SUPPORT

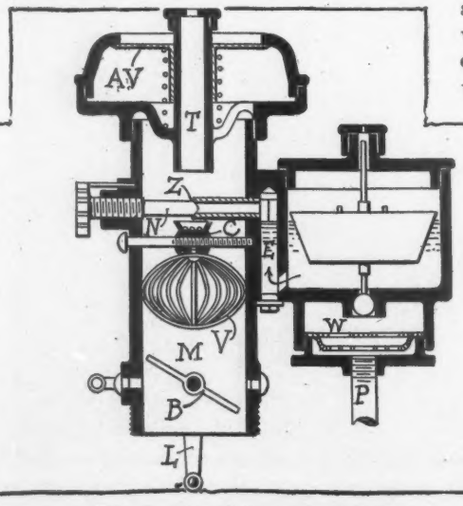


FIG. 3—NEW CARBURETER DESIGN

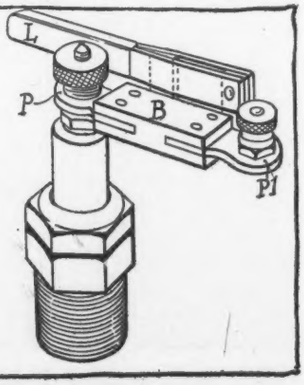


FIG. 4—NOVEL SPARK PLUG SWITCH

The Motor Car Repair Shop

Hints for the Amateur

AS every magneto of different design has its characteristic troubles it has been the policy of Motor Age to publish, from time to time in these columns words and illustrations intended to educate the professional and amateur repairmen into the intricacies of these various mechanisms. The manufacturers, of course, would prefer very much to make all repairs on their own mechanisms, and in many cases it would be cheaper and more practical for the owner to let the factory or its branches make such adjustments or repairs as in time become necessary; but as this is in many cases impossible and often quite impracticable it is hoped that those who will not or cannot conveniently take advantage of the facilities offered by the manufacturers, will at least profit by these articles. It often occurs that when a magneto is suspected of being out of order, unless the operator is familiar with its construction or at least with a knowledge of making a casual inspection, much unnecessary work may be done, some of the delicate parts damaged or perfectly good adjustments disturbed. In Fig. 1, the rear end of the latest Splitdorf magneto is shown. Assuming that the motor had been misfiring, and running along jerkily and the spark plugs and wires had been thoroughly inspected, one can begin to suspeet the magneto. The first thing to do would be to stop the motor and take hold of all the terminals on this end of the apparatus and try to wiggle them to see if they are loose. If any loose ones are found they should be tightened and the motor started to see if the trouble is eliminated. If everything on the outside is apparently in good order, loosen the thumb-nut E and the nut N and swing the yoke or blade spring Y downward and clear of the plate P and remove the plate. This will expose the circuit-breaker mechanism and permit of its inspection. A more thorough investigation may be made of this feature if it is next removed from the magneto. To do this remove the control rod from the arm and draw the distributor away from the magneto. If it does not come off readily do not try to force it; shake it a little and if it seems to catch, try to find out what prevents its removal; perhaps one of the lower corners of the yoke Y is sticking up in front of it, or perhaps you have forgotten to disconnect the control-rod from the arm A. Always handle a delicate mechanism gently. Fig. 2 shows how a distributor will appear when removed and it is now ready for inspection as follows: Lift the lever A and examine the contact surfaces of the contact-points P and PI, if these platinum points are not burnt off or pitted and make good con-

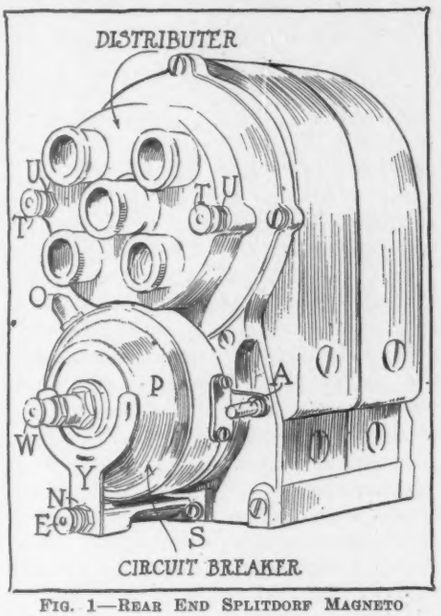


FIG. 1—REAR END SPLITDORF MAGNETO

tact, pass on to the roller R, which should revolve freely but should not be worn or loose on the pin I.

If these things are in good shape and everything else in good order the circuit-breaker can be re-assembled into place and the motor turned over slowly by another while the operation of the parts is scrutinized. The platinum points should separate about 1-32-inch, if they do not loosen the lock-nuts L and LI and then adjust for the proper space by applying wrench to head H of screw. If the platinum points are burnt or pitted so badly that they cannot be properly trimmed with a fine smooth file, if you are not a mechanic or properly equipped with tools, send the circuit-breaker complete as shown in Fig. 2, to the factory or one of its branches, and it will be returned to you promptly and in good shape. If you are a mechanic

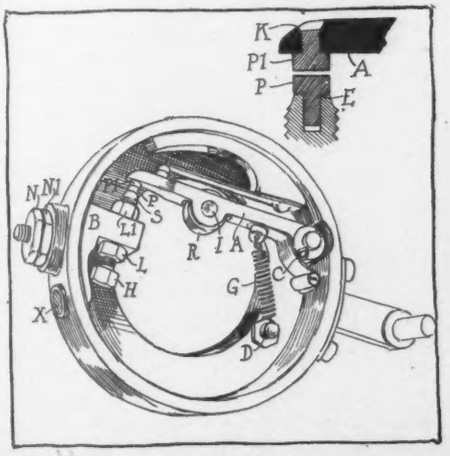
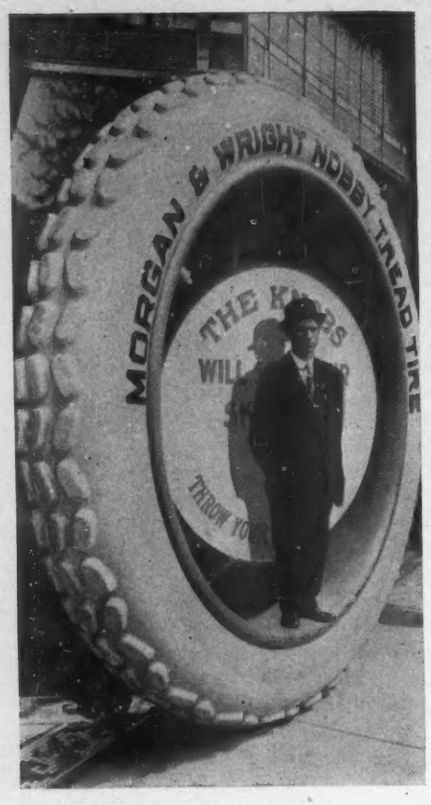


FIG. 2—THE CIRCUIT-BREAKER-BOX

dis-assemble the affected parts from the circuit-breaker-box and either send them alone to the factory to be fixed up or have a pair of points sent you.

To disassemble the parts to which the points are attached, slip the spring G from the ball-headed post D, clamp the ends of the cotter pin C together with a pair of small pliers and draw it out, then remove the lever A; the adjustable contact screw cannot be removed unless the block B is disconnected from the circuit-breaker-box, therefore to disconnect the block B, first dig the wax from the point X and unscrew the screw which it covers. This wax is soft and may be removed with the blade of a small pocket-knife; next loosen nut N, then NI and remove the block B. Sectional views of the ends of the contact screw and lever A respectively are shown in their relative positions in the upper right-hand corner of Fig. 2; the points P and PI being adapted to fit into recesses as indicated. In removing the points there is generally enough of them left that a grip upon them may be obtained with a pair of pliers, so that the point P may be simply pulled out of the end of the screw: as the rear end of the hole in the lever A, however, is counter-sunk or flared out so that the point therein may be riveted into place, it must be driven out from behind with a small drift or a nail of suitable size and with a blunt, flat point. To replace the points, as well as pins I and rollers R, which may be obtained by mail from the manufacturer of the magneto, the point in the lever A should be riveted as shown at K; and if the edge E of the screw is slightly burred up before the point is driven into place it will be held securely.

It is rarely if ever necessary that removal of the distributor is required, but as there are operators who are apt to tamper with this feature, a few words in regard to it may be appreciated. The distributor-cover with cables and carbon-brushes intact may be readily removed for inspection by loosening and removing the thumb-nuts T and then the nuts U. When the cover has been removed a glance will suffice to show that all brushes are either protruding about ¼ inch as they should, or otherwise, and by pushing them in with the finger-tip the springs behind the brushes may be tested. If the brushes are worn and the springs do not cause them to protrude more than ⅛ inch they should be stretched. To stretch a spring pull the brush outward very carefully until it is possible to get hold of a coil of the spring with the nails of the thumb and forefinger then stretch it a mere trifle. Overstretching may cause brush to bind.



LARGEST TIRE IN THE WORLD

Among the Makers

GEORGE T. Briggs Changes—George T. Briggs of the Factory Sales Corporation of Chicago, has been made sales manager of Wheeler & Schebler, of Indianapolis.

Humphrey Promoted—S. H. Humphrey, superintendent of the Brush Runabout Co., has been promoted to factory manager. Before going into the Brush organization he was connected with the Peerless Motor Car Co., of Cleveland.

Handley Promoted—At a recent meeting of the board of directors of the United States Motor Co. J. I. Handley was elected a vice-president. Two years ago he was made district manager for the Maxwell-Briscoe Motor Co. with offices at the company's New Castle plant. Later he removed to Chicago, where he has remained as district manager until the present time. He will be located at the home office in New York.

Reo Invades Canada—J. P. Fillingham, until recently assistant superintendent of the Reo factory at Lansing, Mich., has been appointed general superintendent of the Reo Motor Car Co. of Canada, Limited, at St. Catharines, to succeed R. B. Hamilton, resigned. In order to take care of the increasing demand throughout the dominion for the Reo, the directors have decided to increase the capacity of the Canadian plant. Additional ground in the vicinity of the factory has been purchased, and on it will be erected a modern two-story brick building, 90 by 100 feet. Work on the erection will be begun at once, and it is planned to have the new building ready for occupancy by October 1. Machine tools to the value of $20,000 have been purchased for installation in the new plant, and orders for material, sufficient to build 600 four-cylinder cars, have been placed. A majority of the orders for raw material are being placed.

Adds to Speedometer Plant—The Stewart & Clark Mfg. Co. of Chicago will complete this week its big new addition to the plant, 110 feet front, three story and basement, and 50,000 square feet floor space, which will increase the facilities, and provide for an output of about 1,800 speedometers per day. The new plant will have a specially equipped department for the manufacture of the Stewart standards. This is an exclusive design of the company, a combination of clock, speedometer and electric light on a handsome brass standard to be bolted to the frame of the car, which has become extremely popular.

Change at Frisco—One of the most interesting agency changes that has occurred in San Francisco in recent days is the switching of the Cadillac agency from Cuyler Lee to the Morrison-Cole Motor Car Co. For several years the Cadillac has been in the hands of Cuyler Lee. About 3 years ago the latter also secured the agency of the Packard. Exclusive representation has now been made the policy of both of these organizations, and as a consequence Lee came to the parting of the ways. The Morrison-Cole Motor Car Co., which it is now officially announced will handle the Cadillac, has been recently organized for that purpose. At its head is A. E. Morrison, a few years ago prominent in Boston and elsewhere in the east.

Kelsey's New Company—Hartford, Conn., is to be the home of another motor car company, which is brought through the local board of trade, and the new concern, the C. W. Kelsey Mfg. Co., will, it is expected, eventually give employment to several hundred skilled mechanics. The company was recently organized under the laws of the state of New York with a capital of $250,000 for the purpose of producing what President Kelsey terms popular-priced cars. The company has just procured a 5-year lease of the greater portion of the Cheney silk mills and expects to begin operations at once. Everything will be ship-shape about the middle of September. The officers of the company are: C. W. Kelsey, president; vice-president, W. D. Diston, of Philadelphia; secretary, G. M. Robinson; treasurer, Marion Kelsey. F. S. Hyatt, until recently purchasing agent of the Columbia Motor Car Co., and its predecessor, the Electric Vehicle Co., will serve the new company in the same capacity. G. F. Kuhn, for many years identified with the Siemens-Halske Co. and with the Maxwell-Briscoe Co., is the engineer. The company proposes to manufacture a small car to be known as the Motorette. It seats two persons side by side.

Mora Receivers Hopeful—George W. Todd and Horace McGuire, who have been appointed receivers of the Mora company, are now in possession of its business and manufacturing plant. They believe a reorganization of the company by its creditors and others will be brought about in the near future. In the meantime, they will endeavor to keep the plant in operation. They hope to have uncompleted cars finished and to be able to supply the demand for cars as fast as orders are received.

Agent Sent to Alaska—For the first time in the history of the motor trade in the northwest an agent has been sent through Alaska to demonstrate to Alaskans and to the world at large that a motor car can be operated successfully and economically in what is supposed to be the frozen north. This agent, W. W. Bent, of Seattle, was sent to Alaska on the initiative of George W. Miller of the northwest factory branch of the Winton Motor Carriage Co. At Skagway, Alaska, Mr. Bent made his first sale, arriving there June 20. From there he will journey to Dawson and from there to Nome, where he expects to make many sales on account of being the first to enter the Alaskan field.

Pierce-Arrow Statistics—One of the requirements in New York's new motor car law is that all chauffeurs must answer a list of questions promulgated by the state. These bear on his personal habits as well as his driving history and an examination of any good sized collection of application papers brings out some interesting facts. Recently forty-five applications were forwarded to Albany from Buffalo for men in the employ of the Pierce-Arrow Motor Car Co. That continuity of employment is more than a catch phrase at the Pierce-Arrow factory is shown by the fact that of the forty-five men thirty-three of them have been with the company more than 5 years. Some remarkable mileage has been piled up by the forty-five men. Their total mileage as given in the applications for licenses is 1,943,000 miles, an average of 43,177 miles each. Seven of them have driven 100,000 miles or over and two, both long-time members of the testing brigade, have piloted cars more than 250,000 miles. Most remarkable of all is the fact that despite the length of time the forty-five have been driving but three of them have been arrested for speeding and there have been but two serious accidents, an aver-

and Dealers

age of one arrest for every 623,866 miles and one accident for every 971,500 miles. In both accidents the drivers of the cars were held absolutely blameless and not even arrested.

Simms Buys a Factory—The Simms Magneto Co. has bought a factory site at Bloomfield, N. J., on the Lackawanna railroad. A two-story concrete building will be started the middle of August and will be equipped with the most modern machinery. The factory will be in full swing next February and give employment to from 1,200 to 1,500 men.

Indianapolis Deal—All of the agencies and business of the Co-Auto Motor Co., 23 Kentucky avenue, Indianapolis, have been taken over by the recently organized Auto Sales Co., of that city. The new company will now have the Fuller, Cutting, Monitor, Demot, Westcott and Jackson agencies in Indianapolis and will occupy the Kentucky avenue location. The Auto Sales Co. is composed of Douglas Case, M. G. Beckner and Cass Connaway.

Death of Charles A. Welch—Charles A. Welch, president of the Welch Brothers Motor Car Co., of Milwaukee, representative of the Packard and the Rauch & Lang electric, died at his summer home at Whitehall, Mich., on July 24, of heart failure. He was 59 years old. Mr. Welch is the man who made White Rock mineral water famous. He came to Waukesha, Wis., about 20 years ago, without means. The famous White Rock springs, then an unknown quantity, came into his hands, and with the assistance of relatives, Mr. Welch developed it so greatly that in 1905 eastern capitalists paid him $1,250,000 in cash for his interest.

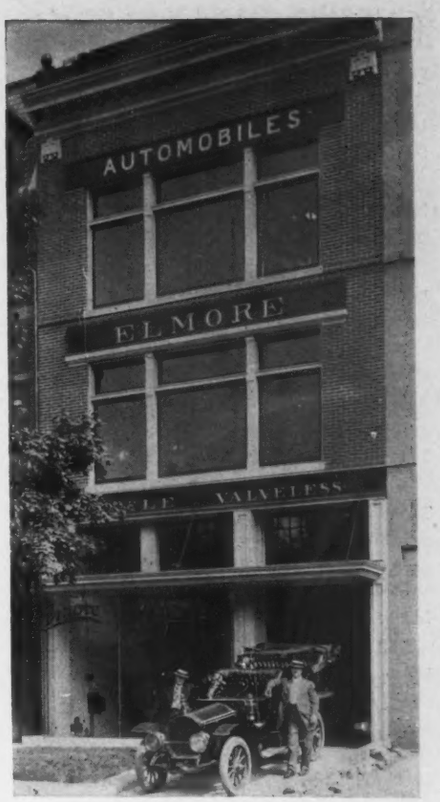
Big Suit Withdrawn—A suit involving an item of $291,151 and an important point in taxation has been withdrawn from the superior court although settled some time before. The suit was that of Albert L. Pope and George A. Yule against the city and town of Hartford concerning the taxation of funds in the hands of receivers of the Pope Mfg. Co. at the time of the receivership. In October, 1908, Mr. Pope as receiver returned on his list of taxable assets a plant valued at $300,000 and business values at $200,000. To this the appraisers added an item of $291,151 for cash in the bank. Application for relief was made to the city board of relief and the matter finally got to the high courts and was settled. Of this money charged up by the appraisers, $100,000 was transferred to New Jersey to pay a dividend ordered by the court of chancery of that state. On June 24 last Judge William L. Bennett decided that the money belonged to the creditors of the company and the city of Hartford took an appeal from this decision which was reversed in the supreme court. A new trial was ordered but never was held.

Staley Resigns—Frank Staley has tendered his resignation as general manager and vice-president of the Studebaker Brothers Indianapolis Co., to become effective August 15. It is reported that Frank B. Willis, of the Willis-Holcomb Co., agent for the Packard, will be Mr. Staley's successor.

New Windshield Factory—The Banker Windshield Co., which has been located for years in the Banker building, at Baum and Beatty streets, Pittsburg, will move about August 15 to the manufacturing plant at Ellsworth avenue and Summerlea streets, now occupied by the Pittsburg Motor Vehicle Co. This building is 230 by 80 feet. The front of the building will be occupied by the offices, in the back of which is a large stock room, while the woodworking department will occupy the entire center of the building. In the rear will be the machine shop, tool room and buffing and paint shop.

Frisco Dealers Organize—The motor car dealers of San Francisco have at last organized. At a meeting held this week twenty of the most prominent firms of the city formed the Motor Car Dealers' Association of San Francisco, as the outgrowth of weeks of effort to get the trade together. At the head of the association is J. A. Marsh. Cuyler Lee is vice-president; William L. Hughson, treasurer, and C. S. Richardson, secretary. The membership of twenty consists only of those who signed the call for the meeting, and many others of the local motor car representatives will undoubtedly join the new association.

Lozier Changes—The removal of the general offices of the Lozier Motor Co. to Detroit, which will take place October 1, on the completion of the new factory at Detroit, will result in several changes in the official roster of the company. F. C. Chandler, formerly manager of the western sales agencies and foreign department, has been elected to the vice-presidency of the company and will be in charge of the sales department. There will be no change in the treasurer's department, Samuel Regar, in charge, continuing his duties as treasurer on removal to Detroit. C. A. Emise, manager of the metropolitan sales agency and department of advertising and publicity, severs his connection with the sales department to assume charge of a new department of publicity and advertising. W. S. M. Mead, formerly manager of eastern sales agencies, succeeds Mr. Emise as manager of the New York and metropolitan agencies and will also have charge of the foreign department, with headquarters at 1751 Broadway, New York city.



C. E. MYERS' STORE, WASHINGTON, D. C.

Now a Peerless Branch—The Peerless company has decided to convert its Chicago agency into a branch and has taken over the new building of the Tennant company, at Michigan avenue and Twenty-fifth street, placing J. R. Buck in charge. W. G. Tennant will continue in the sales department.

Largest Tire in the World—An accompanying illustration is an exact reproduction of the Morgan & Wright nobby-tread tire and was used for display purposes during the recent Elks' convention at Detroit. According to standard tire sizes, it would be a 96 by 12 tire. It is so large that a man can stand upright comfortably inside the rim.

Akron After Plant—The chamber of commerce of Akron, O., has taken up the matter of securing the location of the Akron Selle Co., which proposes to erect a large plant for the manufacture of motor trucks and motor appliances. The Akron Selle Co. has secured an option on 10 acres of land near Kent, O., and several other locations are also being considered. Being informed of these facts, the officials of the chamber of commerce immediately got busy with the result that Akron has a good chance of being given the plant. The plans for the plant call for a structure of steel and concrete 160 by 62 feet.

Brief Business

CHICAGO—The Fal Motor Co., of Chicago, has increased its capital from $200,000 to $900,000.

Lansing, Mich.—The Steely Auto Co. has been incorporated with a capital of $150,000.

Beatrice, Neb.—The Jonz Auto Co. has increased its capital from $25,000 to $1,000,000.

Stoughton, Wis.—The Stoughton Carriage Top Co., of Stoughton, Wis., is now turning out motor-car tops and specialties.

Philadelphia, Pa.—The Brown Auto Top Co., 437 North Broad street, Ira L. Brown, proprietor, has closed a lease for more commodious and better equipped quarters at 1347 Noble street.

Green Bay, Wis.—The Lucia Brothers Motor Car Co., with branches in several northwestern Wisconsin cities, has been appointed representative of the Thomas in Wisconsin and the upper peninsula of Michigan.

San Diego, Cal.—A large garage is being erected at Fifteenth and D streets for J. M. Fisher. The new garage is to be of brick, 80 by 40. Spacious showroom will face on D street, and the rear of the building will be used for a machine shop.

New York—Plans are being prepared by Henry D. Trush for a garage to be erected at 146-150 West Sixty-third street. It will cost $75,000 and will possess several unique features, among them two entrances connecting with a circular driveway to the coach stand in the rear of the structure.

Poughkeepsie, N. Y.—The deed transferring the dock property on the Hudson river from the city of Poughkeepsie to the Fiat Automobile Co. has been filed. The articles of incorporation of the Fiat company make possible the manufacture of motor boats as well as cars, and with the aid of the newly acquired water front this branch may be developed in a few years.

Milwaukee, Wis.—The Mickelson Motor Co. has been organized at Milwaukee by T. M. Mickelson for the purpose of building motors for the motor vehicle trade. The large factory building at 128-130 Ferry street has been leased and will be used until larger quarters can be obtained or a plant erected. Mr. Mickelson was for a long time connected with the Davis Mfg. Co., of Milwaukee.

Milwaukee, Wis.—The feat of raising $110,000 by popular subscription in a public mass meeting was accomplished in 1 day at Clintonville, Wis., a little city, one day last week. The day had been set aside as booster day for the Besserdich four-wheel-drive motor car factory, which now is assured. Ground will be broken as soon as the corporation is permanently organized. Preceding the mass meeting there was a parade in which fifty cars, gaily decorated, participated. William Besserdich, inventor of a four-wheel-drive, gave several unique tests with the demonstrating model built in his machine shops at Clintonville.

Indianapolis, Ind.—The Commercial Car Co. has increased its capital from $100,000 to $500,000.

North Yakima, Wash.—H. E. Kirby has established an agency for the Everitt car at North Yakima.

Boston, Mass.—G. E. and H. J. Habich, agents for the Cole 30 in Boston, have taken on the Hart-Kraft commercial vehicle.

Rochester, N. Y.—A. L. Thompson has received a permit to build a garage, 49 by 203, at 98 Clinton avenue, to cost $9,000.

Indianapolis, Ind.—The Peck Motor Car Co., 324-26 North Delaware street, announces new lines for the season 1911. It will handle the Great Western 40 and the Halladay line.

Columbus, O.—The De Luxe Motor Vehicle Co., of Cleveland, has been incorporated with a capital of $100,000 to manufacture and sell all kinds of motor vehicles. W. G. Moore and others are the incorporators.

Newark, N. J.—Plans have been completed by William E. Lehman for a large four-story brick garage, 51 by 89, fireproof, brick walls, reinforced concrete and steel floors, at Halsey street, for Benjamin Lissner, and will cost about $30,000.

Meridian, Miss.—The Meridian Auto Co. has just organized here to sell and repair motor cars with following officers: President, W. G. Simpson; vice-president, C. L. Gray; secretary and treasurer, J. T. Russell; directors, Sam Myer, Walker Broach, E. Butler, W. G. Hodges and J. W. Bostick.

Toledo, O.—W. H. Goldsmith, special representative of the Buick Auto and Garage Co., recently incorporated and with general offices at Saginaw, Mich., was in Toledo this week, endeavoring to find a site for this district, which will comprise twelve counties in northwestern Ohio and to find a manager for the proposed local concern. The company plans to establish a line of garages in thirty-eight states, one of which will be in Toledo.

Philadelphia, Pa.—The garage of the Winton Motor Carriage Co., at 246 North Broad street, is completed. The building is fireproof, reinforced concrete, 78 by 110. The main room on the first floor is devoted to show room purposes and is 38 by 75, with a 20-foot ceiling. In the rear is the garage, which accommodates from fifty to sixty cars. The second floor is devoted to an immense store room for new and second-hand cars, and back of the storeroom is the repair shop, 40 by 80; adjoining this is the stock room, 25 by 40. A. E. Maltby is manager.

Indianapolis, Ind.—The Great American Automobile, Auto Truck and Aeroplane Co. has been incorporated with a capital of $1,000,000.

Akron, O.—The Budke Rubber Co., 4148 Olive street, St. Louis, Mo., has taken the agency for Swinehart tires and will handle a complete stock of both solid and pneumatic tires.

Portland, Ore.—Under the management of Azariel Smith and Charles W. Cleveland, formerly of Toledo, O., the Hupp Motor Co. has opened an agency in Portland at Seventh and Couch streets.

Milwaukee, Wis.—George W. Chandler has been granted a permit to build a $20,000 garage and stable building at 298-300 Fifth street. The structure has ground dimensions of 50 by 150 feet and will be three stories high.

Des Moines, Ia.—The Ryan Motor Co., which recently located here and taken over the agency of the Chalmers, will erect a new sales and showroom at 1120-22 Locust street. It will be one-story brick. There will be no garage in connection with the business.

Akron, O.—The Automobile and Supply Co. has been incorporated with a capital of $10,000 by Carl Looker, R. S. Grant, B. Bastian, Amos H. Endeback and J. H. Adams, to conduct a general motor car business and to teach people to operate motor cars.

Philadelphia, Pa.—Announcement has been made of the sale of all the holdings of the estate of Judge William A. Porter in the block bounded by Market, Commerce, Twenty-first and Capitol streets, lot 220 by 190 feet, to the Bartlett Garages, Inc., for $400,000. A large garage building costing $120,000 will be erected, having

Recent Incorporations

Detroit, Mich.—Lion Motor Sales Co., capital $10,000; principal stockholders Fred. Postal, Harry Postal, and Robert L. Fee.

Wilmington, Del.—The Federal Motor Co., capital $400,000, manufacture and deal in vehicles propelled by motors; incorporators are Wilmington charter representatives.

Buffalo, N. Y.—Humboldt Garage Co.; capital $1,000, build and operate garages, etc.; incorporators Charles E. Congdon, Charles J. Rosengren, William H. Woodbury, Henry J. Siedler, all of Buffalo, N. Y.

Albany, N. Y.—Catskill Mountain Automobile Service Co., capital $10,000; directors Harry Felber, Arthur Felber and Samuel Weinstein, all of Brooklyn, N. Y.

Columbus, Ohio—Gaeth Motor Car Co.; capital $400,000; to take over the Gaeth Automobile Co.; capitalized at $100,000 and build a factory; incorporators George S. Patterson, H. A. Stahl, E. J. Thobaden, F. C. Carroll and C. B. Colley.

New York—Cooper Auto Exchange; capital $25,000; manufacture, deal in and repair motor cars and accessories; incorporators C. C. Cooper, New York City; J. H. Lent, W. O. Lent, H. A. Miln, Brooklyn, N. Y.

Announcements

twelve stores on the first floor and containing 33,000 square feet of floor space on the upper floors.

Moline, Ill.—The Velie Motor Vehicle Co. has increased its capital from $300,000 to $500,000.

San Francisco, Cal.—Fleming & Tebbetts, Oakland distributors of Morgan & Wright tires, are moving into a new house at Twelfth and Harrison streets.

New York—Samuel De V. Harned has filed plans for making over the three-story brick storage warehouse on the south side of Sixty-third street, east of Park avenue, into a garage to cost $20,000.

Harrisburg, Pa.—A big addition is being built to the plant of the Ideal Motor Car Co. at 906-08 Market street. The new structure will be two stories high, brick, concrete floors, and as near fireproof as possible.

Cleveland, O.—The Kissel Kar Co., of Cleveland, has been incorporated with an authorized capital of $10,000 to operate a sales agency and repair shop with a garage in Cleveland. The incorporators are E. H. Butt, A. Lezens, E. E. Gott, H. E. Gott and W. B. Davis.

Racine, Wis.—Manufacturing plants at Racine, Wis., using iron molders have resumed the regular time schedules, which were somewhat interrupted by a strike of molders. None of the companies supplying castings, parts, etc., to motor car manufacturers was handicapped to an appreciable extent.

Portland, Ore.—One of the most substantial and handsome of the new garages in Portland is the new Packard service building, which was built for Frank C. Riggs, Portland representative. The building is two stories in height and of reinforced concrete construction, and has 17,500 square feet of floor space available in two stories. The building is so constructed that two more stories may be added to it as may be needed. The exterior of the building is finished with red brick.

Detroit, Mich.—The Osburn Electric Co. moved August 1 into larger quarters at 549-553 Fort street west.

Clintonville, Wis.—The Badger Four-Wheel Drive Auto Co. has increased its capital from $45,000 to $110,000.

New Kensington, Pa.—George F. Bishop, an expert mechanic of the White company, has bought a half interest in the New Kensington Motor Co. and will hereafter be manager.

Oshkosh, Wis.—Articles of incorporation have been filed by the Oshkosh Tire Repair Co., of Oshkosh, Wis. The capital stock is $5,000. C. O. Josslyn, E. S. Josslyn and M. Koenig are the incorporators.

Omaha, Neb.—A two-story and basement building will be erected for the Fisk Rubber Co. at 2210-12 Farnam street, the building to cost $15,000. The Fisk company takes the structure on a long-time lease.

Detroit, Mich.—One of the most recent additions to the sales force of the Regal Motor Car Co. is R. H. Schmittdiel, a native of Detroit, who has just been appointed manager of the branch store of the Regal company at Indianapolis.

Des Moines, Ia.—W. J. Riddell announces that the Buick Automobile Co., of Flint, Mich., will erect a four-story business block on West Walnut street this summer for its Iowa agency. The new block will cover a space of 66 by 132 and will cost about $50,000.

San Francisco, Cal.—Rene J. Marx, manager of the Pacific coast branch of the Renault, announces that the Renault car has been placed in new hands in Oregon and Washington. For some time past the French machine has been handled by Fred A. Bennett. It has now been taken over by the Portland Taxicab Co.

Elkhart, Ind.—Fred Helser, formerly with the Black-Crow Motor Car Co., and his father, Jesse Helser, of Warsaw, have formed a partnership under the firm name of the Helser Sheet Metal Specialty Co. and have opened a shop at 123 North Main street. The output of the firm will be all sheet metal parts, including fenders, tanks and fixtures.

Milwaukee, Wis.—The Silent Sioux Auto Mfg. Co., which moved from Sioux Falls, S. D., in the fall of 1909 to Waukesha, Wis., and occupied the former plant of the Waukesha Motor Co., has now moved to Milwaukee to take advantage of the natural benefits of a large manufacturing city. The former plant of the Jonas Cycle Co., maker of bicycles, later used by the Jonas Automobile Co. for garage, agency and repair works, has been leased for a long term. It is located at 726-728 National avenue.

Seattle, Wash.—The Metropolitan Motor Car Co. was last week made the Oregon and Washington agency for the Alco car.

Pueblo, Colo.—The Royal Livery Co. has completed and added to the livery department a 50 by 20 feet fireproof garage, and the firm name has been changed to the Royal Garage and Livery Co.

Louisville, Ky.—Louis Duthenburg, formerly manager of the E. C. Walker Mfg. Co., of Louisville, Ky., and later manager of the Trojan Motor Co., of the same city, announces the opening of an office as designing and consulting engineer.

Hood River, Ore.—The Tip-Top Motor Car Co. is a recently organized firm to handle the Maxwell car in that vicinity and the Lozier car in Oregon and Washington. Captain C. P. McCan and W. T. Sleddon are the owners of the new concern.

Wilkes-Barre, Pa.—The Sheldon Axle Co. has opened an office and sales room at 68 East Twelfth street, Chicago, in charge of S. B. Russell, who is provided with samples of various types of truck axles, as well as all kinds of horse-drawn axles and springs of every description.

Racine, Wis.—The new plant of the Racine Mfg. Co. is distinguished for the fact that it has the largest shaving and sawdust chutes in the world. The largest chute is 500 feet long and 6 feet in diameter. The company is turning out approximately as many bodies at this time as before the fire of December 12, 1909, which totally destroyed the plant.

San Francisco, Cal.—The Elmore car is to have a new home in San Francisco. A. J. Smith, the Pacific Coast distributer, has taken a 5-year lease of a new permanent building which is to be erected on Golden Gate avenue, near Van Ness avenue. The new place will have a floor space of 36 by 120 feet, with a finished basement. It will be used for Elmore cars exclusively.

Chester, S. C.—D. P. Crosby, president of the Chester Machine Co., and J. M. Hough have formed a partnership for the manufacturing of motor cars. The foundry building on Gadsden street is being overhauled and 110 by 51 concrete floor is being put in. The concern intends to at first only assemble parts, later on branching out into the manufacture of all parts except engines.

Beatrice, Neb.—The first carload of machinery to be used in the new factory of the American Automobile Co. has arrived at Beatrice and is being placed in position in the old Jontz factory. The American Automobile Co. recently took over the business of the Jontz Automobile Co. The erection of a three-story factory building just north of the old Jontz building is planned. The company is capitalized at $1,000,000, over half of which is paid up.

Recent Incorporations

Victoria, Texas—Overland Garage Co.; capital $3,000; incorporators Paul Plummer, R. H. Welder, John J. Welder, Jr.

Cleveland, O.—Hupp Motor Sales Co.; capital $15,000; incorporators James A. Farrell, Thomas Coughlin and others.

Chicago—White Motor Car Co., capital $100,000; motor cars and supplies; incorporators James E. Plew, Robert A. Cutting, Charles W. Luetrell.

Boston, Mass.—Champion Spark Plug Co.; capital $50,000. President, Fred W. Baker; treasurer and clerk, Randolph Frothingham; attorneys, Tyler & Young, all of Ames building, Boston.

Plainfield, N. J.—Automobile Distributing Co.; capital $2,500, to do a motor business; build and operate cars of all kinds; incorporators Allen B. Laing, Alexander Milne, Harry W. Marshall, Eugene M. Laing.

New York, N. Y.—Broadway Auto Touring Co.; capital, $1,000; to purchase, build and operate motor cars and vehicles of all kinds for transportation of passengers; incorporators Tobias Sanders, Barnet Sanders, Jacob Steigelfest, all of New York City.

Legal Lights and Side Lights

ILLINOIS OWNERS WARNED

THE motor car owner in the state of Illinois who does not comply with all the conditions of the law will find himself in trouble, according to James A. Rose, secretary of state. Information the secretary of state has compiled shows many owners have failed to secure a license for the year 1910 after having taken out one last year when the law went into effect on July 1. While the law on the point reads that licenses must be secured annually, it appears many owners have misinterpreted it and have thus made themselves liable to trouble with the secretary of state who has threatened prosecutions. By comparing the license record of this year with that of last year, Mr. Rose has ascertained there are a great number of machines not accounted for. It is likely the owners of last year will be called to account for them. If the person to whom a license was issued last year still retains his machine but has not secured his 1910 license, then he is liable to fine. If he has sold the machine, then he failed to comply with the law by failing to turn into the office of the secretary of state a bill of sale signed by himself and the purchaser of the machine as required by law. This section will get drivers and sellers of second-hand cars into trouble for failing to secure a license after purchasing a second-hand machine, as the licenses are not transferable. An owner may retain his same license number from year to year by expressing such a desire to the secretary of state when applying for renewal of license.

FIGHTING MARYLAND LAW

The fight is on against the Maryland motor vehicle law by prominent Washington motorists. The first move to test the constitutionality of the law was made July 27 when John T. Hendrick, of Washington, was arrested by Constable Charles W. Barr, of Hyattsville, Md., on two warrants charging him with operating a motor car on the Washington and Baltimore turnpike without procuring a license from the Maryland motor vehicle commissioner. This license, it is further set forth in the charges, is required by section 137 of the motor vehicle law of Maryland, and without having secured a certificate of registry such as is required by section 133. Justice of the Peace W. Brooke Hunter, of Hyattsville, heard the cases. The arrest was made at the instance of the National Automobile Association, with headquarters in Boston, which has determined to test the law.

When the warrants were read Attorney Ralston, representing the National Automobile Association and Mr. Hendrick, moved to quash on the ground that the law upon which the warrants are based is contrary to the constitution of the United States, in that it constitutes an unlawful and unauthorized attempt on the part of the state of Maryland to regulate commerce between states and imposes a direct burden on such commerce and intercourse between citizens of the United States. Further, that the law is unconstitutional and void in that it obstructs, impedes and prohibits the exercise of the right conferred on citizens of the United States by the constitution of free ingress upon, passage through and egress from the states of the Union in general, and the state of Maryland in particular, and to passage to and from the national capital; that section 137 in connection with sections 132 and 140A constitutes an unlawful discrimination against the residents of the District of Columbia in favor of the residents of the states of the union, in that it prohibits the use of the roadways of Maryland to said residents of the District of Columbia for motoring purposes for any period whatsoever during the years, without first paying a registration and license fee, whereas the payment of such fees is not required by said act from the residents of the states of the union for two periods of 7 consecutive days in each calendar year.

Further contentions are that the law is not a proper use of the police power of the state; that the law is not a proper exercise of the revenue powers of the state, and that if a charge for the use of the roads of the state were contemplated, it is not based upon the value of such use to the person to whom it is given, or the detriment to the road arising from such use, but is unequal, unfair and is class legislation, granting such use according to differing scales of payment. Justice Hunter overruled the motion to quash. The defendant pleaded guilty to the charges and was fined $25 and costs on the charge of operating without a license and $15 and costs on that of being without a certificate of registration. Appeals were noted in each case and the defendant is given 30 days within which to file appeal bonds. Counsel for the defense said that they would take the cases right up the line to higher courts if Justice Hunter's opinion is sustained.

"Record of Motor Racing"

A "Record of Motor Racing," compiled by Gerald Rose, is a detailed report of 15 years of motor racing in America and abroad, dating from the Paris-Rouen trials in 1894 up to and including the grand prize race at Savannah, Ga., November 26, 1909. The aim of the book has been to record the events which lead up to the organization of, and the events which took place during, the race, with a short résumé of the characteristics of the competing cars. Due credit has been given to the various motor car journals and eminent men who aided the author so ably in this compilation. In speaking of the Chicago Times-Herald contest—the first American road race and, in fact, the first motor contest held in this country—which took place November 2-28, 1895, over a 94-mile course, the author says: "One hundred entries were received, but only two cars competed—Muller's Benz and a Duryea." He declares that the records of this race "constitute the most valuable record of the old cars, and it is much to be regretted that the French committee did not see fit to make similar tests of the vehicles entered for their competitions, for the details now available of the old continental cars are very limited." There are 144 illustrations and seven maps. The book is published by Reviers Brothers, London, under the authority of the Royal Automobile Club.

NOT SCARED BY DECISION

The Ohio state motor car department is not paying a great deal of attention to the decision of Judge Curtis E. Johnson, of Toledo, who in the case against Walter F. Brown, of that place, charged with exceeding the speed limit, held that a motor car does not come within the meaning of the law which applies to motor vehicles only. In handing down his decision, the judge said: "It is not necessarily a violation of the law to operate a motor car at more than 15 miles per hour within the city limits unless the machine is one that can be defined as a motor vehicle. I am of the opinion that at present the word cannot be judiciously construed to apply solely to those vehicles that are defined by law to be motor vehicles." The decision really nullifies the state law if it is sustained, and steps have been taken to carry the case to the higher courts, where a different decision is confidently expected. Until the matter is passed upon by the supreme court the department will not change its method of issuing licenses and regulating the speed of motor cars.